ADRA

ADVENTIST DEVELOPMENT AND RELIEF AGENCY- KENYA

FINAL EVALUATION:
ADRA Kenya's Water Improvement Program for Mwingi District

PROGRAM NAME:
Water Improvement Program for Mwingi District

CONSULTANT:
Daniel Mututa

DATE:
June 2011

School pupils enjoying water way from school no more carrying water from home to school instead they carry water as they get back home.

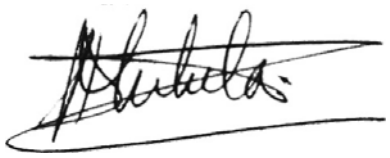
External consultant - Daniel Mututa interviewing committee members of Nyaani bore-hole.

Kaunguni borehole Care taker observing children as they pump water to ensure proper use of pump.

Constructed sand dam.

AUTHOR'S SIGNATURE

NAME: Daniel N. Mututa

SIGN: 

DATE: 30th June 2011

ACRONYMS

Abbreviation	
ADRA-K	Adventist Development and Relief Agency- Kenya
AIDS	Acquired Immune Deficiency Syndrome
ASAL	Arid and Semi Arid Lands
CBR	Crude Birth Rate
CBTP	Community Based Technology Provider
CDR	Crude Death Rate
CHV	Community Health Volunteer
CORPS	Community Resource Persons
DC	District Commissioner
DEO	District Environment Officer
DO	District Officer
FGD	Focus Group Discussion
GOK	Government of Kenya
HIV	Human Immuno-defiency Virus
IEE	Initial Environmental Examination
IMR	Infant Mortality Rate
NEMA	National Environmental Management Authority
NGO	Non- Governmental Organization
SAP	Structural Adjustment Programme
SMC	School Management Committee
SO	Strategic Objective
SO1	Strategic Objective No.1
SO2	Strategic Objective No.2
SOW	Scope Of Work
TOR	Terms of Reference
UFC	User Fee Coordinator
USAID	United States of America International Development Aid
U5MR	Under 5 Mortality Rate
WATSAN	Water and Sanitation
WMSP	Water Maintenance Service Provider

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EXECUTIVE SUMMARY

ADRA Kenya is a registered NGO in Kenya since 1985. It is involved in providing services through a community based approach utilizing participatory development methods that emphasize local participation, environmental concerns and future sustainability. In this regards ADRA -Kenya through a grant from USAID developed the Mwingi Water Improvement Program whose overall object was to" **Contribute to livelihoods and assets of 200,000 people among the poor and vulnerable in Mwingi District, Kenya through enhanced access and utilization of water resources."** The District has a population of over 300,000 people with the female population accounting for 54% while males accounting for 46%.

The water improvement program for Mwingi District targets part of the poor and vulnerable populations of the larger Mwingi District which covers a total area of 5,255.40 square kilometers. The area is bestowed with harsh climatic conditions with mean annual rainfall of 600-800mm falling in March_April (short rains) and October_December (long rains). The area is characterized by prolonged droughts in most of the years that result to crop failure and resultant famines. During the good years, like most areas in Ukambani, maize and other subsistence crops are planted, but mainly livestock keeping is the main practice with donkeys as part of the herd. In real sense every household has at least one donkey for the purposes of carrying water for domestic use.

Adventist Development and Relief Agency (ADRA) as the implementing agency for the Water Improvement Program for Mwingi District, was charged with the responsibility of implementing the project, funded by USAID. The Project was funded in May 2008 and the completion date was expected to be 30th April, 2011, but it was later given a no cost extension of three months up to end of July 2011.

The project is multi disciplinary, combining water, health and sanitation as the key pillars. The project focused on these three components, so as to maximize the core benefits which are environmentally sustainable and wide-reaching. It should be noted that integrated water, sanitation and hygiene education is critical in efforts geared towards improved livelihoods and poverty reduction.

The project overall goal was to contribute to livelihoods and assets of 200,000 people among the poor and vulnerable in Mwingi District, through enhanced access and utilization of water resources. The project was formulated in order to achieve the following strategic objectives

- Increase access to clean water supply and sanitation services for 87,500 people (12,500 households) among the poor and vulnerable populations of Mwingi District.
- Decrease the prevalence of common water-borne diseases affecting 75,000 people in Mwingi district.

The final project evaluation was conducted by a team of professionals under the guidance of the external lead consultant. The process was guided through the following key steps;

- Interpretation of the TOR/SOW as provided by ADRA-K;
- Discussions and formulation of the evaluation program and the calendar;
- Desktop document reviews;
- Development of the tools and instruments;
- Data collection in the field through questionnaires, focus group discussions, key interviews and observation analysis;

- Data cleaning and analysis;
- Preparation of the final evaluation report.

The evaluation findings in general revealed the following:

- All project activities were carried out as specified in the proposal;
- 51 boreholes were sunk. Only 1 unserviceable due to high salinity and fluoride levels, efforts are being made to correct the problem. The catholic diocese have been engaged to put up a De-florification system of Wikithuki borehole in Kyeithani;
- 6 sand dams have been constructed at different sites and the necessary environmental mitigation measures put in place;
- 85.6% of the population is currently fetching water from boreholes compared to 26.5% before the project;
- 82% of the respondents confirmed that the project has improved their livelihood in different ways; savings in terms of resources, time that has been translated into improved family wellbeing;
- 73% disclosed that their asset base has improved due to the project accrued benefits; it was evident that small shopping centers are mushrooming near the project sites due to availability of water to make bricks, a sign of improved asset, and livelihood, small vegetable gardens and horticultural farms near the sand dams, some beneficiaries reported that the number of their goats has increased and their general net worth (market price).
- 40.5% of the population currently fetch water a distance of less than 1KM,55.1% fetch between 1-5KM, translating to over 95% of the population is currently fetching drinking water a distance of up to 5KM as compared to 63.6% previously;
- 84.9 % of the population currently do not experience water related diseases as compared with 51.2% before the project;
- 58% of the members boil drinking water versus 41.6 previously;
- 69.8% treat water generally as compared with 17.5% before the project was initiated;
- 31.7% have been trained by ADRA-K on good water and sanitation practices;
- 44.4 % of the population have been trained on effective water and sanitation practices;
- 82.6% of households have pit latrines within their homesteads for human waste disposal;
- There has been a general decrease in water related diseases of 12%;

Details are presented below in Tables 1 & 2

Table 1: Summary of key Evaluation Findings:

ISSUE	**n =**	**%**
DEMOGRAPHIC & SOCIO-ECONOMIC CHARACTERISTICS		
Age : 21- 45 years	410	63.9
Age : Over 45 years	410	33.2
Tribe: Kamba	410	99.0
Sex: Male	410	26.0
Sex: Female	410	74.0
Main occupation: Farmer	410	88.3
Heads of cattle owned: 6 plus	410	8.3
Heads of goat owned: 6 plus	410	51.7

Heads of sheep owned: 6 plus	410	2.9
ACCESS TO WATER IN PROGRAM AREAS		
Main Source : Borehole	410	85.6
Distance to fetch water (Domestic use): Less than 1 KM	410	40.5
Distance to fetch water (Domestic use): 1-5 KM	410	55.1
Distance to fetch water (Domestic use): 6- 10 KM	410	2.9
Distance to fetch water (domestic): over 10 KM	410	1.0
Time spend fetching water: 1HR or less	410	49.3
Time spend fetching water: 1 -5 hrs	410	48.3
Time spend fetching water: 6-10 hrs	410	2.0
Time spend fetching water: over 10 hrs	410	0.5
QUALITY OF WATER AVAILABLE		
Livestock and human water points separated	410	89.4
Treats drinking water: Yes	410	69.8
Treats drinking water: No	410	29.3
Treating method: Boiling	410	58.0
Treating method: Water Guard	410	31.7
Has latrine at home	410	82.6
Latrine has cement slab	410	42.4
Latrine has earth slab	410	40.2
Has water near latrine for washing hands	410	43.9
Human waste disposal: Latrines	410	71.0
Human waste disposal: Bushes	410	18.7
Human waste disposal: Neighbour's latrine	66	6.5
Washes face daily	66	100
Baths daily	66	88.5
Water for domestic use stored in closed containers	66	76.4
Rubbish handling: Burning	410	57.6
Rubbish handling: Pit	410	36.6
WATER RELATED DISEASES		
Knows diseases caused due to water	410	90.6
Has encountered water influenced diseases in family: Yes	410	15.1
Has encountered water influenced diseases in family: No	410	84.9
COMMUNITY CAPACITY IN WATER MANAGEMENT		
Reported existence of water committees	410	86.8
Water management committee composition: Men	410	69.3
Water management committee composition: Women	410	30.7
Water management committee problems(experienced):Yes	410	22.4
Water management committee problems(experienced): No	410	76.1
Water committee trained in management and other safe water handling	410	61.5
Pupils bring hygiene and sanitation messages from schools: Yes	410	82.4
Pupils bring hygiene and sanitation messages from schools: No	410	17.6
Improved hygiene and sanitation practices due to pupils messages	410	89.3
IMPACT ANALYSIS AND OTHER PARARMETERS		
Has the project been helpful to you: Yes	410	89.3
Has the project been helpful to you: No	410	10.7
Source of support for the project : ADRA-K	410	75.1
Source of support for the project : Others	410	24.9
Project implementation participation : ADRA-K and Community	410	87.4
Has the water project contributed towards improved Assets base: Yes	410	73.2

Has the water project contributed towards improved Assets base: No	410	26.8
Has the water project contributed towards improved family livelihoods: Yes	410	82.4
Has the water project contributed towards improved family livelihoods: No	410	17.6

Table 2: Key Project accomplishments

SO1: Increased access to clean water supply and sanitation services for 87,500 people (12,500 households) among the poor and vulnerable populations of Mwingi District.

Activity / Task	No. planned	No. completed	Performance rating	No. remaining	Remarks
Sinking and equipping Boreholes	49 shallow b/holes 2 Deep b/holes	51	100%	Nil	1 unserviceable due to fluoride level. Being corrected through Catholic diocese
Constructing Sand dams	6	6	100%	Nil	1 constructed by World Vision in Tseikuru.
Constructing Earth dams	5	5	100%	Nil	Government match
Constructing Livestock watering troughs	51	51	100%	Nil	Rotary international funding support for livestock water.
Supply and installation of Water tanks	8	8	100%	Nil	Plastic water tanks of 5000 litres installed in learning institution.

SO2: Decreased prevalence of common water borne diseases affecting 75,000 people in Mwingi District

	Activity/Task	Indicator	No. planned	No. completed	Performance rating	No. Undone	Remarks
	Establish health clubs in schools	No. of clubs formed	30	30	100%	0	All clubs have been formed
	Provide hygiene behavior change health talks to schools	No. of meetings held	36	36	100%	0	All done
	Involve Children in child to child outreach	No. of children in Child to child	1200	1200	100%	0	The number of children that have been reached in total

	programs activities						are more than1200
	Set up water storage facilities (Tanks in schools)	No. of tanks installed	8	8	100%	0	8 number of water tanks are complete
	Installation of sanitation dispensers for adolescent girls	No. of sanitation dispensers installed	30	30	100%	0	All the dispensers have been installed in the 30 schools in the health club. Number of girls that have benefited are 3104
	Providing schools with social services and infrastructure in water development and sanitation	No. of schools provided with social services and infrastructure	30	34	>100%	0	The number of beneficiaries that have benefited are: 2940 boys 3104 girls Total= 6044
	Training sessions held with CORPS	Number of training sessions	12	12	100%	0	Training sessions have been held for all the 160 COPRPS in all the divisions(*see a list attached as annex)*
	Gender segregated sanitation facilities established	Number of facilities	30	34	>100%	0	All complete
	Training school Health Club patrons on WASH	No. of patrons trained	60	60	100%	0	All patrons trained

To a greater extent the project specific objectives have been achieved. The evaluation team feels that more needs to done after the project completion so as realize more and more benefits of this project. Among the recommendation are: Follow up program to be formulated, hydro-geological surveys to precede future borehole siting, continued involvement of local communities in all project stages, set up a continuity plan for some of project activities like; the child- child out reach, construction of VIP latrines and associated sanitation and hygiene practices in all households, and capacity building the local communities. Other major concerns include: strengthening the Para- technicians, CORPS, Water User, Committees e.t.c.

CHAPTER ONE: INTRODUCTION AND BACKGROUND INFORMATION

1.1 Justification:

Mwingi District is one of the districts of Kenya, located in that country's Eastern Province. Local people are mostly of the Akamba tribe. North of Mwingi town, is the Mwingi National Reserve (formerly Kitui North National Reserve), which borders Meru National Park and Kora National Park. Mwingi district is one of the 13 districts in Eastern Province. It borders Kitui District to the south, Machakos District to the west, Mbeere and Meru South District to the north and Tana River District to the east. The District covers an area of 10,030.30 km. The District is divided into 9 divisions. These are Central, Migwani, Kyuso, Mumoni, Nguni, Ngomeni, Nuu, Mui and Tseikuru (see table 3).
The district has two constituencies, Mwingi North and Mwingi South. This is a semi arid area which depends highly on relief food and water availability for domestic use is gotten after travelling very distances.

Table 3: Administrative units in the District and their size

Division	Area (Sq. Km)	Population density per sq. KM	No. of Locations
Central	1,204.50	75	8
Migwani	565.60	108	6
Mumoni	1,066.30	38	7
Kyuso	804.40	46	4
Tseikuru	1,326.10	19	3
Nguni	1,751.10	7	3
Ngomeni	1,618.10	13	2
Nuu	1,324.40	17	3
Mui	369,80	45	2
Total	**10,030.30**	**368**	**38**

Source: District Commissioner's Office, Mwingi.

The situation on the ground clearly demonstrates the need to support long-term drought mitigation measures focusing on the water improvement in the entire District.
ADRA Kenya is a registered NGO in Kenya since 1985. It is involved in providing services through a community based approach utilizing participatory development methods that emphasize local participation, environmental concerns and future sustainability. In this regards ADRA Kenya through a grant from USAID developed the Mwingi Water Improvement Program whose overall object is to" *Contribute to livelihoods and assets of 200,000 people among the poor and vulnerable in Mwingi district, Kenya through enhanced access and utilization of water resources."* As presented below the district has a population of over 300,000 people with the female population accounting for 54% while males accounting for 46%. The age distribution is highlighted in table 4 below.

Table 4: Age and Sex distribution in the District (2010)

Age	Males	Females
0-4	17,857	19,119
5-9	21,901	23,261
10-14	24,795	26,359
15-19	21,931	24,233
20-24	14,653	18,561
25-29	11,405	15,170
30-34	9,256	12,059
35-39	7,643	9,760
40-44	6,489	7,701
45-49	5,312	6,277
50-54	4,108	5,245
55-59	3,182	4,112
60-64	2,192	2,631
65-69	1,798	2,234
70-74	1,621	2,200
75-79	1,660	2,528
80+	2,878	3,674
Total	**158,679(46%)**	**185,125(54%)**

Source: Kenya Population and Housing Census 2009

The Water improvement program for Mwingi District targets the poor and vulnerable populations of the larger Mwingi District which covers a total area of 5,255.40 square kilometers. The area is bestowed with harsh climatic conditions with mean annual rainfall of 600-800mm falling in March- April (short rains) and October- December (long rains). The area is characterized by prolonged droughts in most of the years that result to crop failure and resultant famines. During the good years, like most areas in Ukambani, maize and other subsistence crops are planted, but mainly cattle keeping is the main practice with donkeys as part of the herd. In real sense every home should have at least one donkey for the purposes if carrying water for domestic use.

In terms of health, the general status is that, for most of the habitats are poor. Health or lack of it is an important component in the effort to improve livelihoods. The project constitutes a significant contributions towards realizing the noble goal of alleviating poverty, in particular access to water and associated benefits to a larger extend will enhance better living standards and eventually promote community growth towards self sufficiency.

The district has over 51 health facilities. They are inadequate given its vastness. Most of the facilities lack the necessary equipments and personnel to enable to provide quality service to the people. The average distance to the nearest facility is 30 Km. The most prevalent diseases are malaria, respiratory infections, diarrhea, skin diseases and eye infections. The doctor/patient ratio is 1:50,000. Life expectancy level in the district is 55 years, which is below the national average. The District has experienced difficulties in providing efficient health services for the fast growing population because it needs heavy investments to upgrade, modernize and construct new health facilities.HIV/AIDS scourge has in the recent years slowly impeded development in the district. The prevalence rate in the district is 7.6 per cent, which was less than the national of 14% (2007). Despite over 90 per cent awareness, the scourge continues to rise, and the effects are far reaching. The disease has weakened the economically productive population. The most affected age group is between 15 and 49 who constitute the majority of the workforce. The scourge has contributed significantly to high incidences of poverty. The greatest impact has been on the

widows who are left with the heavy burden of caring for their households. This explains the increasing number of female-headed households in the district.
The number of Aids orphans has also been on the increase, resulting in a rise in the number of families headed by orphans. Most of the orphans are forced to drop out of school due to lack of school fees. Others become street children as a coping mechanism. A large amount of family resources is used for medication and other forms of care to the infected. Table 5 below summarizes some of the health indicators in Mwingi District.

Table 5: Health Indicators (2007)

Crude birth rate(CBR)	43/1,000
Crude death rate(CDR)	11/1,000
Life expectancy	55 years
Infant mortality rate(IMR)	98/1,000
Under 5 mortality rate(U5MR)	122/1,000
Total fertility rate	5.89 per woman
HIV prevalence rate	7.6%
Doctor patient ratio	1:50,000

Source: District Medical Officer of Health (DMOH), Mwingi

Adventist Development and Relief Agency (ADRA) as the implementing agency for the Water Improvement Program for Mwingi District , was charged with the responsibility of implementing the project as stipulated in the proposal funded by USAID. The Project was funded in May 2008 and the completion date expected to be 31st July, 2011, after the cost free extension granted.

1.2 Project Details:

The project is multi disciplinary, combing water, health and sanitation as the key pillars. The project focused on these three components, so as to maximize the core benefits which are environmentally sustainable and wide-reaching. It is important to note that integrated water, sanitation and hygiene education is critical in efforts geared towards improved livelihoods and poverty reduction

1.3 Project Overall Goal:

The project overall goal was to contribute to livelihoods and assets of 200,000 people among the poor and vulnerable in Mwingi District, Kenya through enhanced access and utilization of water resources.

1.4 Strategic Objectives.

The project was formulated in order to achieve the following strategic objectives

- Increase access to clean water supply and sanitation services for 87,500 people (12,500 households) among the poor and vulnerable populations of Mwingi District.
- Decrease the prevalence of common water-borne diseases affecting 75,000 people in Mwingi district.

In order to achieve the above, the following activities were planned:

Activities related to increased access to clean water supply and sanitation services

- Drilling of (49) shallow boreholes - up to 70m
- Drilling of 2 deep boreholes - up to 150m

- Construction of 6 sand dams , 5 earth-dams with Government match
- Construction of 51 water troughs for livestock

Activities related to decrease in prevalence of common water borne diseases

- Sensitization and training of students in schools on proper hygiene
- Promotion of child-to-child sanitation outreach activities
- Construction of (90) Ventilated Improved Pit (VIP) Latrines
- Community mobilization and sensitization on hygiene behavior
- Training of community health volunteers
- Promotion and uptake of cost effective water treatment technologies (e.g. boiling and filtration of drinking water before use)

1.5 The Project Implementation programme

ADRA-K and other partner's work with vulnerable individuals and families in their communities by use of a combination of low-cost technologies to provide medium/long term clean water and sanitation/hygiene solutions. This water program engaged partners and target communities to implement the technical aspects of a water and sanitation program and the social aspects for governance and sustainability. The project implementation programme included the following field based activities:

- Surveys and mapping of water and sanitation sites and locations.
- Construction and technical specifications for water and sanitation facilities.
- Community participation and capacity building to enhance ownership and sustainability.
- School involvement in sanitation and hygiene education to enhance good practices.
- Inclusion of special beneficiary needs such as those of girls and women in accessing water and use of sanitation activities through proactive solutions, as well as recognizing the importance of water, sanitation and hygiene education in HIV and AIDS management for people living with the disease.
- Working in partnerships and fostering institutional collaboration with the Tana Water Services Board, Rotary International, US Peace Corps, Ministry of Works, etc.

All of the activities related to drilling, conducting hydro-geological surveys, procurement of drilling permit & water testing was to be done in conjunction with Pass Africa Limited, a contractor identified through a competitive selection process in accordance with donor regulations.

1.5.1. Surveys and Mapping of Water and Sanitation Activities and Locations

The water program in Mwingi was to be implemented within the coordinated framework of the Ministry of Water and linked with Water Environmental Sanitation Coordination, a group in which ADRA- Kenya is a member. This was to ensure that the shallow boreholes and sand dams are geographically targeted. The water program was to facilitate geological surveys, physical surveys and designs before the commencement of any works of civil engineering construction. Sound designs, and good environmental and engineering practices were to be observed all construction works.

In collaboration with Water Resource Technicians employed by the GOK, ADRA-K was to also carry out technical water surveys, water quality testing and design the recommended water storage structures. ADRA-K also provided all the external inputs such as water pumps and accessories, cement, pipes and iron rods for water and sanitation facilities. The clientele communities contributed labor, sand and stones that are largely available locally,

which was quantified as in-kind match. In addition, Tana River Water Services Board was to train and build the capacity of communities to make financial contributions to a community fund to ensure community maintenance of the facilities even after the program has ended. The fund also included future expansion and development of the water point. The trained water and sanitation management committees are expected to ensure sustainability of the water resources including the conservation of the catchment area of the water point.

1.5.2. Construction and Technical Specifications for Water and Sanitation Facilities

The boreholes were drilled with heavy drilling equipment and thereafter equipped with Afridev hand pump. At the sites where communities were able to procure generator sets and maintain the completed water points, the program drilled deep boreholes (above 70 m) that can draw more water that can be pumped out by motorized equipment. The shallow boreholes are protected from surface contamination by constructing cattle troughs at least 100m away from the immediate vicinity of the borehole. This will ensure that no dirty water seeps back into the boreholes thus eliminating the potential for contamination.

Sand dams have been constructed by excavating a trench across the river bed up to the rock foundation. A concrete retaining wall will then be anchored in the river bedrock and constructed to a height of about 2m. This will ensure that when it rains, the retaining wall will trap sand effectively creating a sand dam. Sand is effective in storing water even in severe droughts. The water stored can be accessed by scooping away the sand to form shallow wells from which water is scooped. After 2 to 3 years, the trapped water improves the water content of the soil around the sand dam and raises the water table. A shallow well or shallow borehole and in some cases, a borehole can then be developed to tap the ground water so retained. The retention of water and rising of the water table contributes to natural resources and environmental conservation.

The pit latrines will be constructed by excavating pits of about 1.5m wide and as deep as practical, depending on the soil formation. Concrete slabs will be used for the VIP latrines. This makes cleaning easy and enhances hygiene practices. Alternatively, sand plats (plastic covers for latrines) will be purchased and installed so that they can be relocated to other sites once the pits fill up. This is particularly important in schools where the pits fill up within a short time and evacuation facilities are not available.

In accordance with the National Policy for the Sustainable Development of Arid and Semi Arid Lands, the Mwingi Water Program will contribute to:

a) The establishment and strengthen the provision of basic social services and infrastructure in water development and sanitation facilities in (51) community sites and 30 schools. To mitigate conflict in water use between humans and livestock, the program will construct water troughs for livestock at the recommended distant from the water points for domestic use.
b) Participatory systems of local governance for improved natural resource management by training (51) water user groups on use and maintenance of water systems. Training areas will also cover group dynamics, legal requirements and advocacy issues of human/community rights to water.
c) Increased knowledge and skills on appropriate water technologies, maintenance of water systems, sanitation and hygiene, among others. These will be achieved through training of the following groups:
    - Community based technology fabricators
    - Water maintenance service providers
    - Water user association coordinators
    - Community health volunteers

1.5.3 Community participation and Capacity Building to Enhance Ownership and Sustainability

ADRA-K appreciates that its role in community development is only that of a catalyst and capacity builder if the activities initiated are to be sustained. Thus the program's key strategy in the target community is to train and develop skills of local community members to prepare them to be able to competently handle technical and administrative matters related to the water program. Creating community capacity is specifically required in light of the GOK's Structural Adjustment Program (SAP), which has reduced extension and technical support at the community level, thus creating a huge gap between the demand for technical services and supply. Community capacity building activities are also plainly practical, as they harness the enormous latent capacity that currently resides unused in the community.

ADRA-K's successful community capacity building approach will entail establishing water committees and user associations that (a) serve as the administrative and management unit at each project location, (b) function as the main entity through which project services are delivered, and (c) constitute a democratic, representative forum in which all members of the community can participate. Water committees and user associations are asked to nominate community members whom ADRA- K will train as Community-Owned Resource Persons (CORPs). Community members to be selected for training as CORPs must have demonstrated certain characteristics that give them a comparative advantage over others such as:

- Openness to learn new technologies/methods in water harnessing and conservation.
- Friendly person with people skills.
- Able to disseminate technical information.
- Resident of the area.
- Demonstrated experience and interest in the particular field being selected.

Some of the CORPs that ADRA will support the community to put in place will be Community Based Technology Providers (CBTPs) of required technologies, Water Maintenance Service Providers (WMSPs), that is those who will repair and maintain water points, and User Fee Coordinators (UFC), that is those who will collect user fees and coordinate water user associations for action among others.

Complementing increased access to water and sanitation facilities, ADRA and Ministry of Health's Health Education and Sanitation Officers will train selected CORPs as community health volunteers (CHVs) whose responsibility will be to increase the awareness of targeted communities in proper water and sanitation practices through organized meetings, training and demonstrations that will enable communities to identify water and sanitation problems. In addition, ADRA will train Community Water and Sanitation Management Committees and in liaison with CHVs will conduct health and sanitation training for communities at public meetings, churches, schools and other similar gatherings with messages on the role of the Water and Sanitation Management Committees, services available, benefits to be accrued from services provided by water user associations and how individuals can reduce and prevent water-borne diseases. The trained water user committees will be exposed to field visits in other districts with similar and successful projects.

ADRA will empower CHVs (often members of the WATSAN Committees) to conduct targeted household training and backstopping, particularly for vulnerable households who need to improve their knowledge and practices to prevent water and sanitation diseases. The CHVs will be appropriately trained and equipped to communicate the desired messages

through participating in residential training sessions and in follow-up capacity building throughout the project.

ADRA will use audio-visual educational materials in selected local languages to sensitize people on the problems occurring due to the use of unsafe water, poor sanitation and hygiene practices. As part of the educational process in the communities, ADRA will use charts and other simple training items available through partners (e.g., MOH) on proper water and sanitation practices. Issues related to water will cover various sources of water in the locality, methods of protecting hand-dug wells/bore-holes from contamination, ways of making water safe, hygienic storage, diseases associated with water and how harmful bacteria can infiltrate the water.

The presentations on sanitation will cover issues related to the composition of refuse, the importance of a good refuse disposal system, appropriate methods of refuse disposal and good ways of determining sites for refuse dumps. In addition, issues related to the requirements of a good latrine, types of latrine systems, site selection for ventilated improved pit latrines (VIPs), the features of a VIP, the use and care of latrines, diseases associated with human excreta and personal hygiene will be taught to the communities.

1.5.4. School Involvement in Sanitation and Hygiene Education

The child-to-child peer mentoring approach of hygiene education is based on the belief that children not only need to keep healthy themselves, but can often be highly influential in promoting the good health of others. They are often responsible for younger brothers and sisters, for the care of domestic animals, for collection of water and for household cleaning tasks, and therefore have huge potential for raising family hygiene awareness.

The child-to-child peer mentoring approach will emphasize safe hygiene practices. ADRA will encourage communities to carry out safe hygiene practices, including:

- Taking drinking water from protected sources like hand pumps or protected wells, rather than rivers or ponds.
- Keeping water pots covered when they are not in use.
- Going to the toilet at a safe distance from water sources that are used for drinking, cooking or other household purposes.
- Ensuring animals are kept away from houses, water sources and latrines.
- Using a sanitary pit latrine instead of going to the bush.
- Hand washing with soap and water after going to the toilet and before eating.
- Making drainage channels or soak pits to take wastewater away from wells and homes.
- Washing fruits and vegetables before cutting, keeping cooked food covered and utensils off the ground.

Schools will serve as resource centers for the demonstrations of low cost water and sanitation technologies for adoption by communities. Child-to-child hygiene education activities will be the forum for technology uptake and sanitation and hygiene practices. The school approach will entail the following:

- Liaise with and facilitate the Ministry of Education to organize workshops for Education Officers at division level and School Management Committees (SMC). This will provide the opportunity to sensitize Ministry of Education on the water program, proposed activities, expected roles and get their input.
- Involve 30 SMCs in the construction of sanitation and adoption of water technologies for use by children and teachers. 8 water storage facilities (tanks) will be installed in

selected schools which can be used for demonstration as well as a means to improving the general sanitation levels in the school.

- Adoption of hygiene education curriculum and training methods used by Water Aid (an NGO that promotes community water programs) and child to child methods employed by Save the Children Fund, UK programs.
- Collaborate and work together with a core team of trainers comprising of 5 Health Education and Public Health staff of the Ministry of Health and 5 Quality Assurance Officers of the Ministry of Education on hygiene education and methodologies of working with schools and children. The core team of trainers will facilitate training and follow up activities in schools.
- Facilitate the core team of trainers to train 60 teachers (two teachers from each target school) who will mobilize their schools to form health clubs and together with children organize appropriate activities.
- Formation of 30 school health clubs with an average of 40 children per club to promote hygiene education in schools and the immediate community. Activities will include debates and health talks on water borne diseases, body care and hygiene practices, environmental hygiene, proper use and maintenance of water points and sanitation facilities, cleaning campaigns, installation and maintenance of simple drinking water and hand washing technologies in the school. The water program will also promote child-to-child communication skills, interactive activities and support their practice through organized sessions.
- Promotion of school exchange visits and debate and essay writing competitions at division level. These will be done in consultation with Ministry of Education and placed in the calendar of extra curricula events. The Water program will support the organization and awards to winning individuals and school teams. These will be done once in a year and be achieved in years two and three.
- Involvement of Parent-Teacher Associations in organizing school open days to share the progress and enhance learning.

1.5.5 Special considerations

ADRA will make a conscious effort to ensure that at least 30% of the project clients are women and girls who benefit from project activities. To achieve this, the project will mobilize the community on the need for both men and women to have equal chances to participate in development activities, and in matters of having access and control of household and community resources. The community members will be encouraged through affirmative criteria to involve women in the participation and management of fora such as the water committees and water user associations, where decisions regarding their development agenda are made. Due to the high rates of prevalence of HIV and AIDS in Kenya, the water program will also provide HIV and AIDS prevention information along with its sanitation and hygiene education and awareness.

1.5.6. *Partnerships and fostering institutional collaboration*

In the proposed project areas, ADRA identified relevant NGOs, Government Ministries and Departments, Research Organizations and Community Based Organizations to collaborate with in the project implementation. Platforms/fora consisting of representatives of organizations were constituted.

1.6 Baseline survey findings

A baseline study conducted in November 2009 was aimed at identifying and documenting the actual situation in the project sites in terms of various output and impact indicators of the project, and to scan the anticipated environmental impacts of the project providing the necessary measures to mitigate any identified negative impacts. However the study further

focused on the overall socio-cultural and economic factors that may affect the implementation of the project and made recommendations for overcoming any such factors. In this view the baseline study was basically aimed at:

- Provision of a base-line for the monitoring and evaluation framework of the program
- Providing a clear picture with monitoring indicators of the program's environmental compliance with particular reference to USAID's Environmental procedures (Reg. 216) and the host country's National environmental Management Act
- Provision of an updated socio-cultural and economic profile of the project sites with a view of assessing any such human factors that may inhibit or facilitate the actual implementation of the program.

In regard to the baseline study, a summary of key findings are presented in the table 6 below:

Table 6: Baseline study summary findings

ISSUE	n=	%
DEMOGRAPHIC &SOCIO-ECONOMIC CHARACTERISTICS		
Age 21- 45	206	67.0
Tribe: Kamba	206	99.0
Formal education: 5 years plus	206	62.1
Main occupation: Farmer	206	62.6
Income: Over 1000Kshs	206	52.9
Heads of cattle owned: 6 plus	206	13.1
Heads of goat owned: 6 plus	206	37.4
Heads of sheep owned: 6 plus	206	3.5
ACCESS TO WATER IN PROGRAM AREAS		
Main Source : Protected	206	78.6
Person fetching water for domestic use: Woman	206	58.3
Person fetching water for domestic use: Man(husband)	206	17.0
Distance to fetch water (Domestic use): 1KM or less	206	35.4
Distance to water livestock: 1KM or less	206	25.7
Pays for water	206	59.7
Time spend fetching water: 1HR or less	206	21.4
Fetching water affects children's education negatively	206	25.2
QUALITY OF WATER AVAILABLE		
Drinking water drawn from a protected source	206	59.7
Livestock and human water points separated	206	86.4
Domestic water stored in safe containers	206	98.5
Treats drinking water	206	17.5
Treating method: Boiling	36	41.6
Treating method: Water Guard	36	58.4
Has latrine at home	172	39.0
Latrine has cement slab	101	68.3
Has water near latrine for washing hands	101	3.0
Human waste disposal: Bushes	115	66.0
Human waste disposal: Fields	115	20.0
Human waste disposal: Neighbour's latrine	115	14.0
Washes face daily	206	92.0
Baths daily	204	70.6
Washes fruits and vegetables before cutting	200	94.0

Covers cooked food	206	96.6
Has structure for drying utensils	206	57.3
Rubbish handling: Burning	206	57.8
Rubbish handling: Pit	206	39.8
WATER DISEASES		
Knows diseases caused due to water	206	94.2
Has encountered water influenced diseases in family	205	27.2
Taken steps to prevent water borne , wash and related diseases	113	76.1
Does nothing to prevent diseases	113	23.9
COMMUNITY CAPACITY IN WATER MANAGEMENT		
Reported existence of water committees	206	37.4
Reported existence of water user's association	206	20.4
Trained in safe water handling techniques	206	29.1
Pupils bring hygiene and sanitation messages from schools	197	35.5
Improved hygiene and sanitation practices due to pupils messages	75	82.7
DROUGHT RISK REDUCTION MECHANISMS		
Aware of effects of drought on livelihoods	164	100
Coping strategies: casual jobs	186	46.8
Coping strategies: small businesses	186	29.0
Coping strategies: support from relatives	186	10.2
Coping strategies: selling water	186	3.2
Organizations supporting during droughts	202	69.3
Support from organizations: food aid	143	25.9
Support from organizations: food work	143	72.7
Support from organizations: water provision	143	1.3
Proposed interventions: development- water related	194	90.7
Proposed interventions: more relief assistance	194	9.3

Source: Baseline report, November 2009

1.7 Purpose of Evaluation

The prime purpose of the this final project evaluation is to ensure compliance with the evaluation requirement of the project, identify and document lessons learnt and use the evaluation report to improve the design and planning of similar projects in the future. The scope of work (SOW) also referred to as the terms of reference (TOR) for this final evaluation is included as Annex 1 in this report. The exercise was conducted using a joint participatory approach led by an external consultant and is expected to provide realistic program results achieved as a result of program implementation. The program design has clearly stated objectives, valid indicators and realistic methods for measuring change over the life of the program. The evaluation data is meant to determine the incremental change in the target population and provide some lessons learned through experiences that ADRA Kenya can use in implementing similar projects in future.

CHAPTER TWO: PROJECT EVALUATION METHODOLOGY

The final project evaluation was conducted by a team of professionals under the guidance of the external lead consultant. The process was guided through the following key steps;

- Interpretation of the TOR/SOW as provided by ADRA-K
- Discussions and formulation of the evaluation program and the calendar
- Desktop document reviews
- Development of the tools and instruments
- Data collection in the field through questionnaires, Focus group discussions, key interviews and observation analysis
- Data cleaning and analysis
- Preparation of the evaluation report

2.1 Interpretation of the TOR and formulation of evaluation programme

The evaluation team under the guidance of the external consultant undertook an in-depth discussion of what is expected of the exercise. This resulted into a reviewed SOW (Annex i). The evaluation team guided by the project proposal developed a framework for analyzing the achievement of the projects in terms of program deliverables based performance indicators spelled out in the proposal. An evaluation calendar/ programme was developed (Annex ii) that guided the whole process. Each activity was supervised by the responsible teams as indicated.

2.2 Document Reviews:

The evaluation team first reviewed all available reports on the project before going to the field. The documents reviewed included the Baseline survey report, program quarterly progress reports and environmental compliance guidelines so as to have a better understanding of the program. In addition, the team reviewed all the available data at ADRA-K field office Mwingi regarding the program i.e. the project proposal, the performance indicators, monitoring and evaluation plan, the key deliverables and other relevant documentations on the Water improvement program for Mwingi district.

2.3 Development of data collection tools and instruments

The evaluation team after documents review isolated the key evaluation parameters that will guide the field based data collection. This resulted into a draft questionnaire that was pre-tested before the final questionnaire is developed. This was followed by recruitment of data collectors (enumerators) who underwent a 3 - days training to perfect the data collection methodology and pre-testing. A total of 15 enumerators were recruited and trained. A final data collection questionnaire was revised (Annex iii) and was used in the field.

The evaluation team conducted a full blown data collection survey with the enumerators. The enumerators collected data for the sampled households by the use of the revised questionnaire designed in accordance with the project performance indicators and in consideration to the goals and objectives of the program.

2.4 Field data collection:

A number of techniques were used: The evaluation team used rapid data collection techniques. These were administration of the revised questionnaire, observation analysis, focus group discussions, and key informant interviews with beneficiaries, implementing staff and other partners. The data obtained was both quantitative and qualitative in nature. The key areas of concern were:

- Basic informant administrative details

- Demographic and socio-economic data
- Water source, use, availability and related issues
- Sanitation , diseases and hygiene issues
- Future project sustainability
- Project benefits: individual and community
- Individual comments and suggestion on the project

The evaluation sites were selected based on the proximity of the project site. Respondents were interviewed within the project site although some respondents were interviewed far wide from the project site. As seen from the tables 7 below a fairly equal number of respondents were interviewed in each administration division. The interviews comprised of closed and open ended questions which were used to gather information from the respondents. The respondents targeted 70% women and 30% men. The process was purely random sampling and a total of 410 respondents were interviewed. Data collection exercise was undertaken in 5 administrative divisions: Central, Migwani, Mui, Nguni and Nuu. The distribution of respondents is as indicated in the table below:

Table 7: Distribution of respondents per Division

Division	No. of Respondents	Percentage
Central	82	20.0
Migwani	80	19.5
Mui	84	20.5
Nguni	84	20.5
Nuu	80	19.5
Total	**410**	**100**

Source: Evaluations Report, May 2011

Key informants were interviewed in an effort to establish key sustainability issues as spelt out in the TOR. They included: District Commissioner and District officers, District Water officer, Drought Management Officer, District Public Health officer, Primary school teachers, Chiefs, Project Chairpersons, Para – technicians' community Resource Persons (CORPS) and ADRA-K staff. Focus group discussion were held at all respective sites visited (Annex 5) with beneficiaries in an effort to supplement data gathered through other means. In particular this was aimed at ascertaining the impact, benefits and other relevant information in regard to the project.

2.5 Data cleaning and analysis

Data collected was cleaned by considering the relevance of the information in regard to the main evaluation objectives. The final clean raw data is available separately in this report. Details of the findings after data analysis are presented separately also in chapter five in this report under findings and recommendations.

CHAPTER THREE: PROJECT SUSTAINABILITY

Various discussions held with different stake holders revealed the following:

- The GOK was a partner in the project by construction of five (5) earth dams as their match (Annex 9). By allocating the resources for the construction of these earth dams it is clear evidence that the GOK fully supported the initiative. More so, inviting ADRA-K to participate in the District Steering Committee and working in partnership with line ministries is a major milestone in achieving local/national water and sanitation related goals.
- Future sustainability of this project is based on a collaborative approach from all parties involved. As reported by the DWO, DEO, DPHO and Provincial administration, ADRA-K exit strategy has been developed consultatively taking cognizance of all interests from the respective actors and stakeholders. In this view the project benefits will be realized in the long run if all are involved and participate in maintaining the project operational.
- Community willingness to continue participating in all forms of activities in an effort to maintain the project operational after the project closure.
- Despite the challenges experienced, every effort is being made to see the project accrued benefits sustained in future. This was evident after discussions with area DC, DO's, DMO, Chief's, and project chairpersons. Most important was the enthusiasm portrayed by the focus group discussions with water management committee at different sites.
- Many interventions have been undertaken in the past in this region but more require to be done due to increased population growth thus causing higher water demand and continuous breakdowns of old water systems. As mentioned by the District Water Officer, the major challenge has been minimal resources allocated by the GOK for rehabilitation of stalled systems. The GOK staff has developed a forward plan for rehabilitation of such systems depending on the yearly budgets. In regard to this project, the line ministries feel that all the projects initiates under ADRA-K shall be incorporated in their routine maintenance project for future sustenance and avoid stalling immediately after the donor has left. This has been a major problem in most parts of the country.
- Communities have already been sensitized on their roles and obligations in relation to future sustainability of the project.
- ADRA-K has developed a comprehensive exit strategy for this project which will be discussed and adopted by the beneficiaries after the completion of the project.
- During the survey 90% of the respondents felt that the project was quite beneficial to them. Over 75% were willing to take part voluntarily in any task related to maintenance of the project for their own benefit. Another 78% reported that they are the owners of the project not the implementing agency. This is a clear indication that incase of any need of future resources they are willing to provide or seek from other donors to make the project started by ADRA flourish.
- As indicated in table below, ADRA-K has integrated specific sustainability aspects throughout the implementation process. These are aimed at sensitizing and building required capacities within the beneficiaries for continued management of the potentials developed during the project implementation cycle.

Table 8: Project Sustainability aspects

Activity	Completion date	Key personnel	Other integrated activities undertaken together	Expected impact/ Results expected	Associated Sustainability aspects
Drilling and equipping of boreholes	May 2011	Water Officer	Site Trainings	51 serviceable boreholes	Trainings on management, and Para technicians.
Construction of sand dams	December 2010	Water Officer	Trainings	6 sand dams	Management committees trainings
Construction of VIP latrines	May 2011	Water Officer	Site identification	90 VIP latrines	Trainings in relevant issues
Installation of water tanks	September 2010	Water Officer	Talking walls on water tanks	8 water tanks installed	Routine maintenance by the beneficiaries

CHAPTER FOUR: ENVIRONMENTAL COMPLIANCE

4.1 Mitigation Measures and Findings

As per the baseline study conducted, November 2009, an Initial Environmental Examination (IEE) was to establish whether the proposed activity has any adverse environmental impacts. The key objectives were:

- To establish and document for each output and impact level indicators from the results framework that will be used to evaluate the performance and determine the value of the program,
- To establish baseline data which will verify whether the program activities comply with USAID's environmental procedures (Known as CFR216 or Reg. 216)

In order to carry out this task effectively the following Acts relevant to the program were taken into consideration:

- Environmental Management and Co-ordination Act(EMCA1999)
- The Public Health Act, Cap 242
- The Water Act, 2002
- The OSHA, 2007
- The Physical Planning act, Cap 286

The baseline study recommenced various mitigation measures to ensure sustainability as presented below;

Table 9: Table on project environmental compliance efforts:

Type of intervention	Environmental concern	Proposed Mitigation measures	Evaluation findings
Boreholes	Land use conflicts	Avoid locating projects in areas that may require displacement of other important land uses, people or encroachment on historical, cultural or traditional use areas Ensure sufficient community participation and organization for effective planning and management of the water project, and for equitable water distribution	No potential conflict reported Community members were fully involved in the project planning and implementation process
	Conflicting demands on surface or ground water supplies	Develop sources where water quantities are adequate and where there is no conflict especially during the dry seasons	There were in-depth consultations with all stakeholders on the same
	Illness/ Diseases due to poor source water quality, contamination, poor maintenance practices, wrong use, abandonment of supply or sanitation works	Ensure water sources are fit for drinking and make regular testing as part of the project Assess present and future source contamination risks are minimized through adequate planning, design and installation of water supply and sanitation	All sites were tested and were found to be fit for domestic use except 1 where fluoride levels were high. Efforts are being made to correct the anomaly Any potential risks are

		works, community education and training, capacity building to improve on overall hygiene	taken care of through trainings and sensitization forums
	Creating habitats for disease carriers such as mosquitoes and snails, increasing the occurrence of water borne diseases such as malaria and bilharzias	Assess ecology of disease carriers Employ suitable prevention and mitigation measures including education of local people on good drainage practices and pit latrines Monitor disease occurrence and other public health indicators, and take corrective measures as needed e.g. physical changes to water supply and sanitation works, medical and education.	A comprehensive programme has been developed to check on any adversity
	Contamination of water source/supply	Protect ground water sources from surface run off Locate source well away from latrines, septic systems, traditional defecating areas, and animal pens. Protect surface water sources from contamination from run off from near by agricultural areas(silt, agro chemicals, and animal waste, other uses such as bathing, and animal watering, garbage and vegetable debris Maintain source works and pipes to prevent deterioration/ damage that can allow entry of contaminants from people, animals debris, run off water and soil	The designs fully took care of these concerns as recommended.
	Ground water contamination	Ensure adequate design, installation and maintenance of latrines, holding tanks, septic systems and water shed soak-ways.	All undertaken at design stage
	Surface water contamination	Locate latrines, septic systems and soak ways at least 30M from any water body (stream, river, lake, and pond).	Careful implementation was addressed
Sand dams	Reduction of water available down stream water users	Avoid areas of significant economic /cultural values to the local people Ensure that down stream water users are partners in planning for the project and other mitigative measures	All observed

	Creation of habitats for disease carriers such as mosquitoes and snails. Increase in water borne diseases such as malaria, bilharzias, dysentery, fevers and worms	Assess the ecology of disease carriers in the water shed Employ suitable prevention and mitigation measures Monitor disease and public health indicators, during and after construction, and take corrective measures as needed.	A comprehensive programme has been developed to check on any adversity
	Loss of natural areas, important habitats and number/variety of species(biodiversity)	Avoid protected natural areas as well as critical habitats or areas with significant biodiversity	The concerns were taken care of
	Threatened water sources for the reservoir(siltation, evaporation losses)	Assess state of water shed, plan and implement appropriate water conservation programs: Water shed improvement measures Conduct training to ensure efficient tending of improvement measures Apply agricultural methods that maximize soil moisture conservation	Respective training programmes developed and executed. More being planned in future
	Reduced or altered timing, quantity, quality and temperatures down stream water flows Altered rates and locations of bed and bank erosion and deposition down stream Reduction in quantity and quality of aquatic habitats and fish production Reduction/ loss of downstream substance of commercial fisheries	Ensure thorough analysis and assessment of potential impacts to develop and plan as part of the project an acceptable combination of Water releases required to sustain habitats and fish production Habitat improvements to sustain production and fisheries Development assistance to people depended on reduced fisheries	Addressed at the initial stages
	Blockage of fish of fish migration and access to upstream spawning areas by dam; decrease in fish population downstream	Consider alternate dam locations and possibility of fish-way around them	No report on fishing available
	Conversion of aquatic	Assess fish production potential	

	species in reservoir from those that require flowing water to those that need still water and resulting effects of fishing activities	of reservoir and implement feasible measures to enhance production Provide development assistance to local people to benefit from reservoir fisheries	-do-
	Deterioration of reservoir water quality	Provide areas for bathing, laundry, and animal watering away from the reservoir Ensure local sanitation facilities do not release pollutants to surface or ground water reaching the reservoir Prevent livestock access to reservoir	Community members have designated areas far from the sand dam. Others fetch water for use at home.
	Deterioration of reservoir water from: • Decomposition of flooded vegetation • Nutrients in eroded soils and agricultural fertilizers	Clear vegetation from reservoir before flooding Train farmers in soil and water conservation.	Regular cleaning Relevant training conducted at group level
	Raised water table around the reservoir, water logging and salinization of soils, and lowered agricultural productivity	Develop tolerant fodder and crop species around the reservoir	This is not a major issue at the moment, it has grown naturally.
Toilets	Ground water contamination	Ensure adequate design, installation and maintenance especially where the water table is high or soils have a high clay or sand content Ensure adequate spacing between latrines and soak-aways	Fully addressed at design stages
	Surface water contamination	Locate the latrines away at least 30 M from any water source down stream	Done accordingly
	Odours	Provide for safe ventilation of decomposing gases Locate away from downwind of human settlement and sensitive land uses	Well placed in all water points

4.2 General Remarks and Findings

- **Boreholes**

  Sinking of boreholes was one of the main interventions for the program. Most of the sites were agreed upon by the beneficiaries. The siting was informed by the technical experts partnering with ADRA in the program. The borehole use hand pumps as installed by the technical partner contracted by ADRA. All boreholes have a livestock watering trough. The overall management of the boreholes is undertaken by elected committee members from the beneficiary local community who have been trained of water management skills by ADRA staff. The development of these boreholes was integrated fully with the corresponding health considerations and all proposed mitigation measures observed. To ensure maximum benefits were derived, respective one stance VIP latrines were developed in an effort to prevent any possible contamination of the water source and subsequent spread of water borne diseases as it is a requirement by the public health.

- **Sand dams**

  ADRA Kenya had proposed to construct 6 (six) sand dams in the major streams in the project area. Each of the six sand dams have been constructed in different streams spread all over the project area. The main aim being to trap water in the sand for use during the dry season, by hence raising the water table. This technology is widely applied in ASAL regions in the country. By their nature sand dams have major environmental concerns that need to be addressed. In essence they reduce water flow down stream and may affect the community down stream adversely if not well managed. As highlighted in the baseline study due to these complexities it was established that all stakeholders were involved in the siting and subsequent development of the sand dams. These included: NEMA (DEO), District water Engineer/ officer, District Physical Planners, Community members up-stream and down-stream.

- **Toilets**

  For all toilets constructed it was observed that the design addressed most of the mitigation measures outlined in the baseline report. It was evident that a maximum depth of 25 ft was maintained and actual construction work was started at the rock level. Safe ventilation has been provided and temporary hand washing points established despite that near the boreholes the practice of hand washing after visiting the toilet was not fully observed by the communities.

CHAPTER FIVE: FINDINGS AND RECOMMENDATIONS

5.1 Findings

5.1.1 Document Review Findings

Table 10: Planned activities

Performance Indicators	Total No.
SO1: Increased access to clean water supply and sanitation services for 87,000 people among the poor and vulnerable populations of Mwingi District.	
1) No. of shallow and deep boreholes drilled	51
2) No. of sand-dams constructed (earth dams)	6
3) No. of livestock troughs constructed	51
4) No. of girls attending school due to increased time out of water pursuit	30
5) No. of people (male and female) with access to improved water supply	87,500
SO2: Decreased prevalence of common water-borne diseases affecting 75,000 people in Mwingi District.	
1) No. of hygiene/health talks given to students in various schools	36
2) No. of community people sensitized on hygiene and sanitation	300
3) Number of children involved in child-to-child outreach program activities	1200
4) No. of training sessions held with CORPS	12
5) No. of CORPS trained	160
6) No. of community people (male and female) with access to improved sanitation facilities	350
7) No. of community hygiene sensitization forums held	12
8) No. of ventilated improved pit-latrines constructed	90
9) No. of gender segregated sanitation facilities established	30
10) No. of school hygiene sensitization sessions held	30
11) No. of children regularly attending school due to enhanced wellbeing	30
12) No. of sanitation dispensaries installed for adolescent girls	30
13) Number of school health clubs formed	30

14) No. of teachers trained (club patrons)	60
15) No. of water storage facilities installed in selected schools	8
16) No. of water use groups trained	51
17) No. of community sites provided with basic social services and infrastructure in water development and sanitation	90

Table11: Summary of Evaluation Findings (General)

Objective	Activities planned	Period	Responsibility	Performance indicators	Expected results	Remarks
Increased access to clean water supply	Drilling of boreholes, construction of sand dams and installation of water tanks	2 years	ADRA-K Water officer	No. of boreholes, roof catchments and sand dams serviceable	51 serviceable boreholes, 8 Water tanks and 6.sand dams.	Accomplished
Increased access to sanitation facilities	Construction of VIP latrines in institutions and borehole sites	2 years	ADRA-K Health officer.	No. of VIPs constructed	90 units.	Accomplished

SO1: Increased access to clean water supply and sanitation services for 87,500 people (12,500 households) among the poor and vulnerable populations of Mwingi District.

Activity / Task	No. planned	No. completed	Performance rating	No. remaining	Remarks
Sinking and equipping Boreholes	49 shallow b/holes 2 Deep b/holes	51	100%	Nil	1 unserviceable due to high fluoride level, being corrected.
Constructing Sand dams	6	6	100%	Nil	1No. for world Vision Tseikuru.
Constructing Earth dams	5	5	100%	Nil	Government match
Constructing Livestock watering troughs	51	51	100%	Nil	Rotary international funding support for livestock water.
Supply and installation of Water tanks	8	8	100%	Nil	Plastic water tanks of 5000 liters installed in learning institution.

SO2: Decreased prevalence of common water borne diseases affecting 75,000 people In Mwingi District							
	Activity/Task	Indicator	No. planned	No. completed	Performance rating	No. Undone	Remarks
	Establish health clubs in schools	No. of clubs formed	30	30	100%	0	All clubs have been formed
	Provide hygiene behavior change health talks to schools	No. of meetings held	36	36	100%	0	All done
	Involve Children in child to child outreach programs activities	No. of children in Child to child	1200	1200	100%	0	The number of children that have been reached are more than1200
	Set up water storage facilities (Tanks in schools)	No. of tanks installed	8	8	100%	0	8 number of water tanks are complete
	Installation of sanitation dispensers for adolescent girls	No. of sanitation dispensers installed	30	30	100%	0	All the dispensers have been installed in the 30 schools in the health club. Number of girls that have benefited are 3104
	Providing schools with social services and infrastructure in water development and sanitation	No. of schools provided with social services and infrastructure	30	34	>100%	0	The number of beneficiaries that have benefited are: 2940 boys 3104 girls Total= 6044
	Training sessions held with CORPS	No. of training sessions	12	12	100%	0	Training sessions have been held for all the 160 COPRPS in all the divisions
	Gender segregated sanitation facilities established	Number of facilities	30	34	>100%	0	All complete
	Training school	No. of	60	60	100%	0	All patrons

	Health Club patrons on WASH	patrons trained					trained

5. 1. 2 Field Observations, Focus Group Discussions, Key Informant Interviews and Data Evaluation Findings

In regard to the evaluation survey, a summary of key findings are presented in the table below:

Table 12: Summary of key finding

ISSUE	n=	%
DEMOGRAPHIC & SOCIO-ECONOMIC CHARACTERISTICS		
Age : 21- 45 years	410	63.9
Age : Over 45 years	410	33.2
Tribe: Kamba	410	99.0
Sex: Male	410	24.0
Sex: Female	410	76.0
Main occupation: Farmer	410	88.3
Heads of cattle owned: 6 plus	410	8.3
Heads of goat owned: 6 plus	410	51.7
Heads of sheep owned: 6 plus	410	2.9
ACCESS TO WATER IN PROGRAM AREAS		
Main Source : Borehole	410	85.6
Distance to fetch water (Domestic use): Less than 1 KM	410	40.5
Distance to fetch water (Domestic use): 1-5 KM	410	55.1
Distance to fetch water (Domestic use): 6- 10 KM	410	2.9
Distance to fetch water (domestic): over 10 KM	410	1.0
Time spend fetching water: 1HR or less	410	49.3
Time spend fetching water: 1 -5 hrs	410	48.3
Time spend fetching water: 6-10 hrs	410	2.0
Time spend fetching water: over 10 hrs	410	0.5
QUALITY OF WATER AVAILABLE		
Livestock and human water points separated	410	89.4
Treats drinking water: Yes	410	69.8
Treats drinking water: No	410	29.3
Treating method: Boiling	410	58.0
Treating method: Water Guard	410	31.7
Has latrine at home	410	81.0
Latrine has cement slab	410	42.4
Latrine has earth slab	410	40.2
Has water near latrine for washing hands	410	43.9
Human waste disposal: Latrines	410	71.0
Human waste disposal: Bushes	410	18.7
Human waste disposal: Neighbour's latrine	66	6.5
Washes face daily	66	100

Baths daily	66	88.5
Water for domestic use stored in closed containers	66	76.4
Rubbish handling: Burning	410	57.6
Rubbish handling: Pit	410	36.6
WATER RELATED DISEASES		
Knows diseases caused due to water	410	90.6
Has encountered water influenced diseases in family: Yes	410	15.1
Has encountered water influenced diseases in family: No	410	84.9
COMMUNITY CAPACITY IN WATER MANAGEMENT		
Reported existence of water committees	410	86.8
Water management committee composition: Men	410	69.3
Water management committee composition: Women	410	30.7
Water management committee problems(experienced): Yes	410	22.4
Water management committee problems(experienced): No	410	76.1
Water committee trained in management and other safe water handling	410	61.5
Pupils bring hygiene and sanitation messages from schools: Yes	410	82.4
Pupils bring hygiene and sanitation messages from schools: No	410	17.6
Improved hygiene and sanitation practices due to pupils messages	410	89.3
IMPACT ANALYSIS AND OTHER PARARMETERS		
Has the project been helpful to you: Yes	410	89.3
Has the project been helpful to you: No	410	10.7
Source of support for the project : ADRA-K	410	75.1
Source of support for the project : others	410	24.9
Project implementation participation : ADRA-K and Community	410	87.4
Has the water project contributed towards improved Assets base: Yes	410	73.2
Has the water project contributed towards improved Assets base: No	410	26.8
Has the water project contributed towards improved family livelihoods: Yes	410	82.4
Has the water project contributed towards improved family livelihoods: No	410	17.6

5.2. Access to water

The final evaluation considered three important parameters in determining the improvement in water access. These include:

- Current water source compared with the previous
- Distance from the source compared with the previous
- Time taken to the water source compared with previous

Table 13: Water source comparative analysis

Parameter	n=	Current %	n =	Previous %	% Change	Remark (s)
Roof catchment	410	1	206	0.5	+0.5	Insignificant change
Protected well	410	2	206	8.8	-6.8	-do-
Open stream	410	2.9	206	31.7	-28.9	Noticeable

						change
Unprotected well	410	5.9	206	28.3	-22.4	Noticeable change
Borehole	410	85.4	206	3.4	+79	Noticeable incremental change
Sand dam	410	2.9	206	27.3	-24.4	Noticeable change
Total		**100**		**100**		

Figure1: Current water sources comparative pie-charts

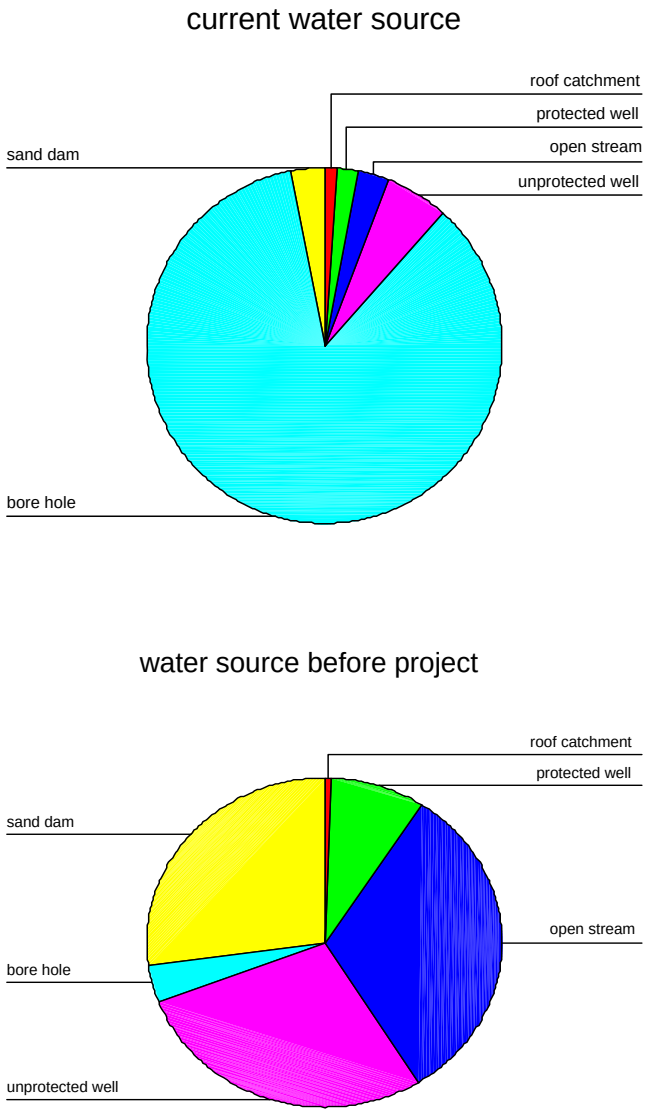


Table 14: Distance to water source comparative analysis

Parameter	n=	Current %	n =	Previous %	% Change	Remark
Less than 1KM	410	40.5	206	15.6	+24.9	Noticeable change
1-5 KM	410	55.1	206	45.9	+9.2	Noticeable change
6-10KM	410	2.9	206	23.9	-21.0	Noticeable change
Over 10KM	410	1.0	206	14.6	-13.6	Noticeable change
Total		**100**		**100**		

Figure 2: Current Distance from water sources comparative pie-charts

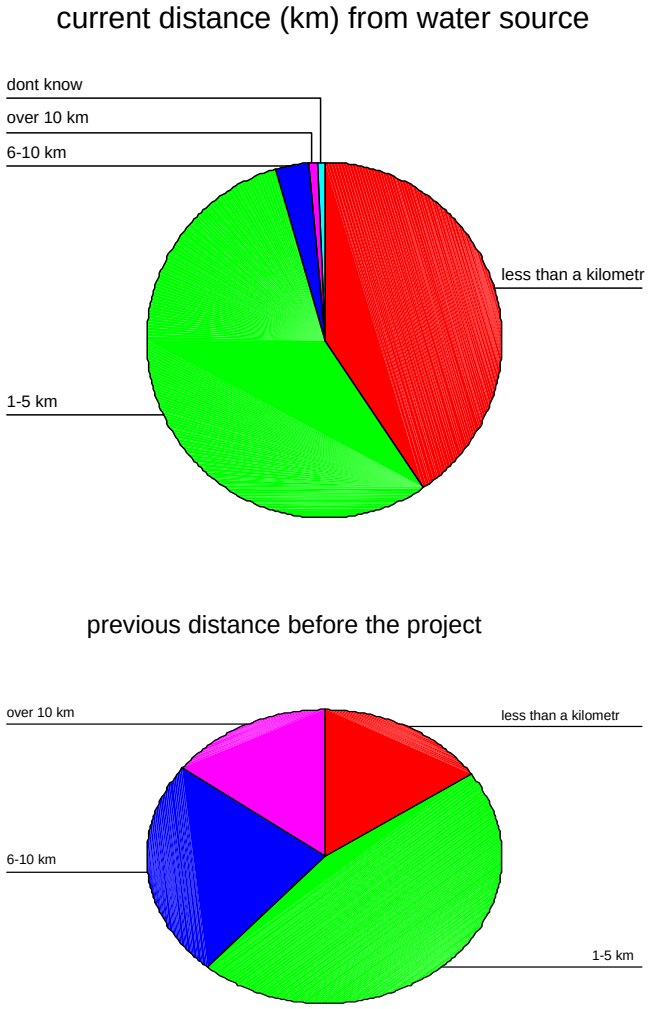
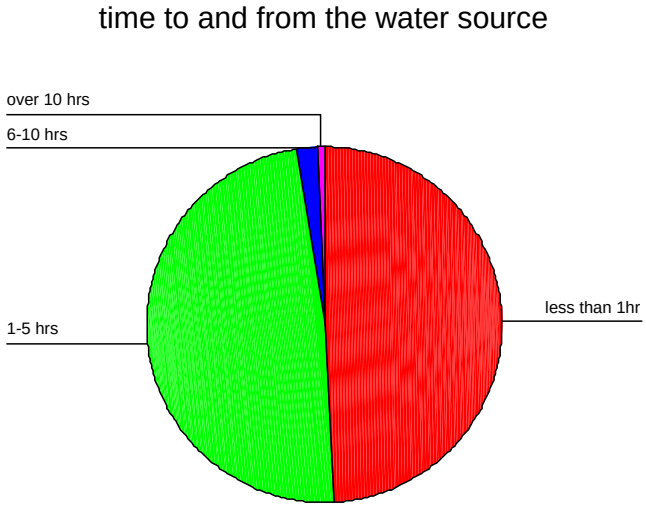


Table 15: Time taken to the water source comparative analysis

Parameter	n=	Current %	n =	Previous %	% Change	Remark
Less than 1hr	410	49.3	206	18.4	+30.9	Noticeable change
1- 5 hrs	410	48.3	206	17.0	+31.3	Noticeable change
6-10hrs	410	2.0	206	36.3	-34.3	Noticeable change
Over 10hrs	410	0.5	206	29.3	-28.8	Noticeable change
Total		**100**		**100**		

Figure 3: Time taken to water source comparative pie-charts



5.3 Quality of water being utilized by the community members

Assessment of the current water quality and associated attributes was carried out by considering the following parameters:

- Prevalence of water related diseases
- Preventive measures being undertaken
- General water treatment
- Training undertaken by ARDA-K
- Acquired knowledge on best practices

Data collected and compared with the baseline in regard to experience on water related diseases revealed;

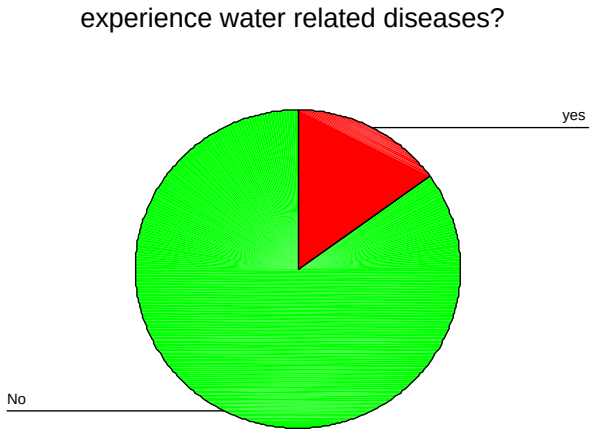
- 84.9 % of the population currently do not experience water related diseases as compared with 51.2% before the project.
- 58% of the members boil drinking water versus 41.6% previously

- 69.8% treat water generally
- 31.7% have been trained by ADRA-K on good water and sanitation practices
- 44.4 % of the population have knowledge on good water and sanitation practices

Table 16: Prevalence of water related diseases

Parameter	n=	Current % YES	Current % NO	n =	Previous % YES	Previous % No	Remark
Experience water related diseases in the family	410	15.1	84.9	206	51.2	48.8	Reduced prevalence is evident

Figure 4: Current water related diseases experienced comparative pie-charts



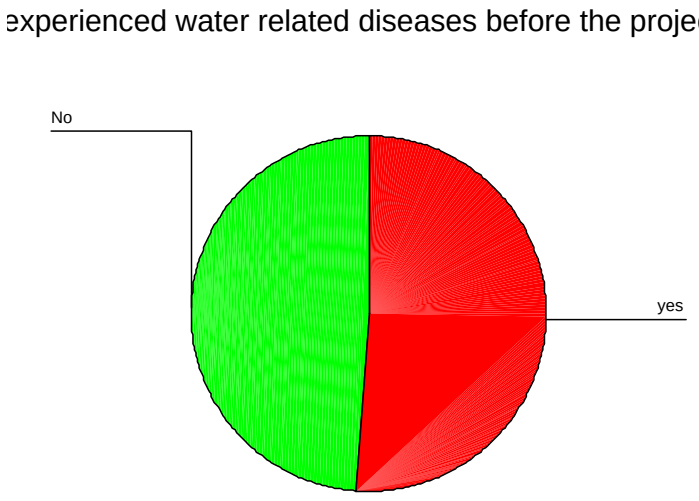


Table 17: Preventive measures comparative analysis

Parameter	n=	Current %	n =	Previous %	Remark s
Boiling	410	58.0	206	41.6	Significant incremental change
Do not treat	410	9.8	206	10.5	small change
Water guard	410	31.7	206	28.7	Small change
No response /missing	410	0.5	206	29.2	
Total		100		100	

Table 18: Water Treatment comparative analysis

Parameter	n=	Current %	n =	Previous %	Remark s
Treats drinking water	410	69.8	206	17.5	Significant incremental change
Do not treat	410	29.3	206	82.5	-do-
Missing	410	0.9		0.0	
Total		100		100	

Figure 5: Distribution community members treating drinking water

Table 19: Training on good water and sanitation preventive measures

Parameter	n=	%	Remark s
Trained	410	31.7	Good percentage covered for a start
Not trained	410	68.3	Significant percentage, needs action
Total		100	

Figure 6: % of community members trained by ADRA-K

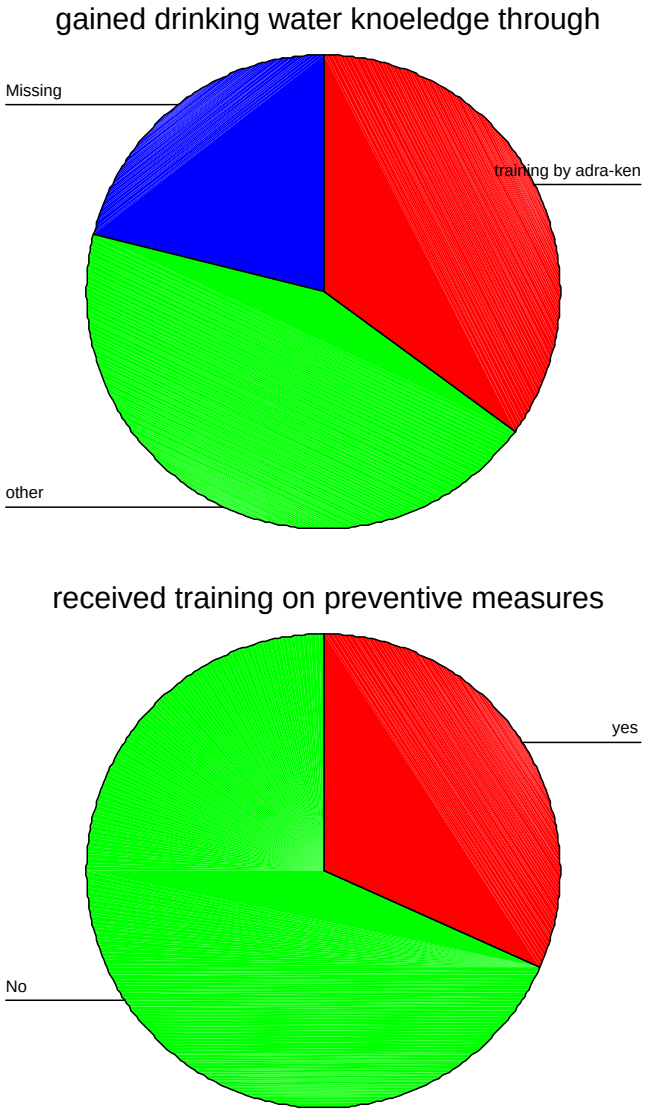
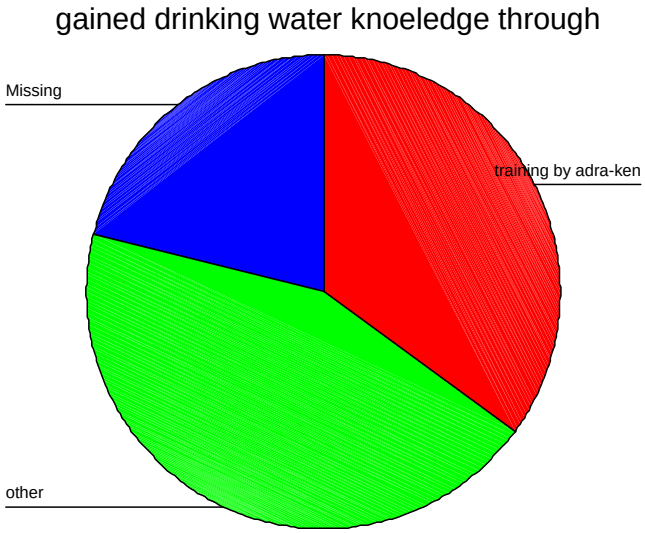


Table 20: % that has gained knowledge through ADRA efforts on preventive measures

Parameter	n=	%	Remark s
Have knowledge through ADRA training	410	44.4	Good percentage covered for a start
Trained by others	410	55.6	Significant percentage, needs action
Total		100	

Figure 7 % of community members with knowledge on preventive measures through ADRA-K effort



5.4 Project sustainability Strategy

In order to sustain the project achievements after the completion of the project, ADRA-K has mobilized the community members into manageable groups with strong management committees. It was evident that the composition of the management committees has at least 30% women. Key indicators are as below:

Figure 8: Existence of a management committee

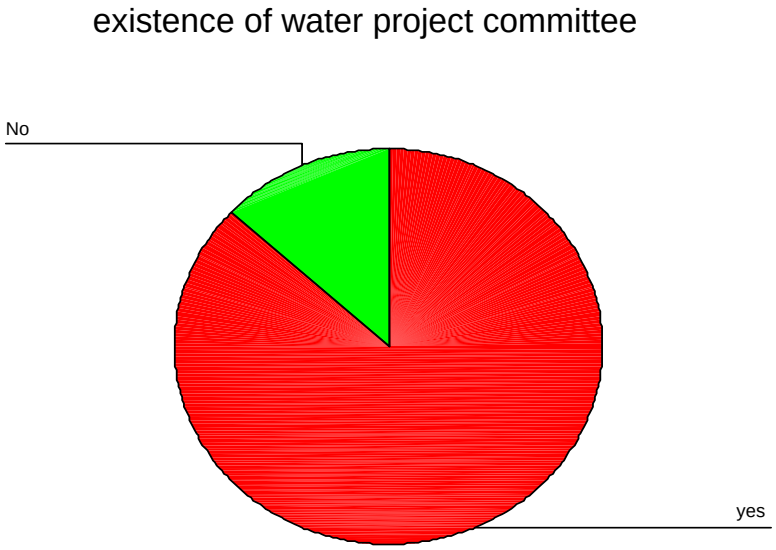


Figure 9: Project committee training

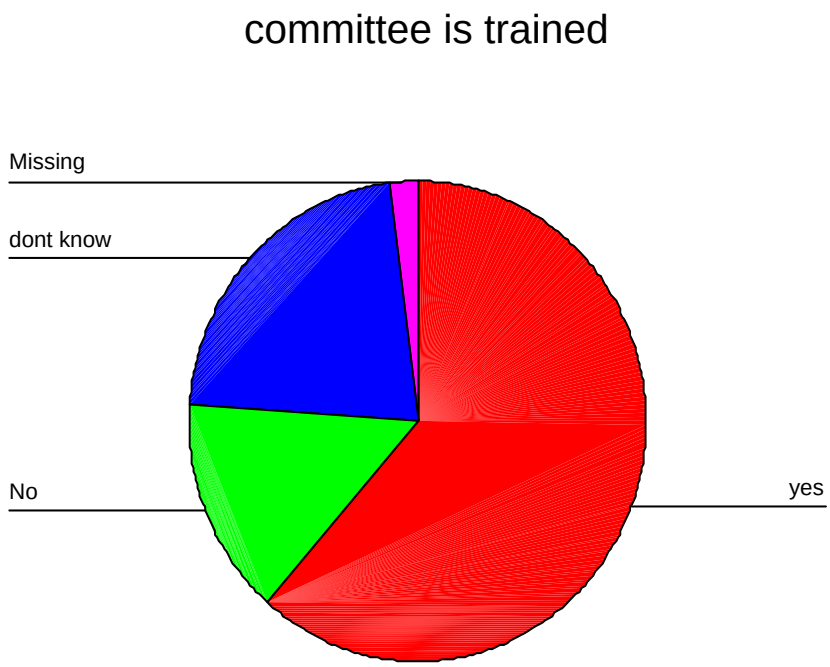
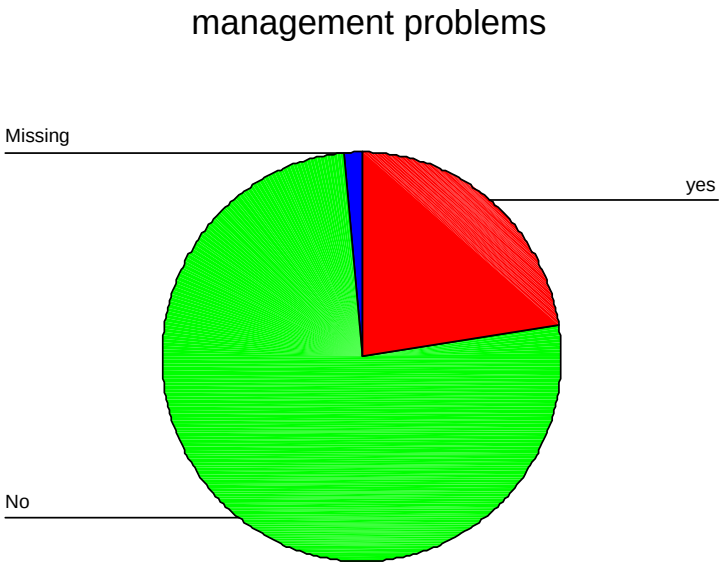


Figure10: Management committee problems



5.5 Recommendations:

Although the project specific tasks and deliverables have been realized the evaluation team recommends the following:

- Follow up program to be formulated so as to enhance further the sustainability issues highlighted in chapter 4 above;
- The siting of borehole in future should be preceded by hydro-geological surveys;
- Community participation in siting of boreholes should be taken into account to minimize the chances of failure. With feasibility study and community involvement important information can be gathered to inform site selection;
- Some of the current programmes within this project should further be continued after completion. These include:
    - The child- child out reach initiatives
    - Construction of VIP latrines and associate sanitation and hygiene practices
    - Training and re-training the CORPS
    - Training and re-training the water management committees and establishment of water user association with pre-requisite management structures (By-laws, conservation of catchments, e.t.c.)
    - The trained CORPS to act as TOT's in their respective areas with support from GOK staff
- Relevant ministries to undertake concerted efforts to strengthen the Para-technicians by mobilizing them for training on operations and maintenance skills, establishing links with supplier, providing the necessary tools and continuously monitoring their performance at project level;
- Organize for a formal handing and commissioning of the project to community members with all stakeholders involvement;
- As envisaged in the proposal, liaise with Tana River Water services Board to formulate a framework for setting up a fund for future repairs and extensions;

CHAPTRE SIX: APPENDICES

Annex 1: SOW/TOR

FINAL EVALUATION - SCOPE OF WORK FOR ADRA KENYA'S WATER IMPROVEMENT PROGRAM FOR MWINGI DISTRICT

MARCH, 2011

I. BACKGROUND

A. Introduction

It is a public policy that United States Agency for International Development (USAID) annually reports to Congress on the impact of Water and sanitation improvement by assessing progress towards health and sanitation in each country receiving United States Government Assistance (623-A-00-08-00014-00). It is also the policy of USAID that the incorporation of environmental oversight, and the analysis and planning associated with it, will improve the effectiveness of any water and sanitation project. Any USAID funded project must comply with USAID's Environmental Procedures (known as 22 CFR 216 or Reg. 216).

Adventist Development and Relief Agency (ADRA) is an implementing agency for the Water Improvement Program for Mwingi District among other recipient agencies in the country. This means, according to the agreement, it is time to conduct a project evaluation. Therefore, ADRA Kenya/ Partners, following the guidelines given by USAID and with the understanding of USAID Kenya Mission, prepared a comprehensive evaluation scope of work (SOW) for the Water Improvement Program for Mwingi district.

Hence, ADRA Kenya/Partners and USAID Mission developed this evaluation SOW for the Water Improvement Program in Mwingi District. ADRA and it's partners believes this SOW is comprehensive and covers all the major areas that ADRA Kenya, Mwingi Water and Sanitation Program activities for FY 2008 - 2011 are addressing in Kenya.

The Project was funded in May 2008 and the completion date will be 30th April, 2011. This project was done in partnership with USAID, World Vision, Rotary Atlanta and Young Jeins. The baseline survey was conducted in September 2009 and and a report on the same availed to every partner.

B. ADRA's Project Evaluation Approach

ADRA's Project evaluation is mainly a joint activity with its local partners, and other stakeholders. ADRA's participatory approach to its project evaluation is expected to provide realistic program results achieved as a result of program implementation.
The program design has clearly stated objectives, valid indicators and a realistic method for measuring change over the life of the program. The program shall use the evaluation data in determining the incremental change in its target population and provide some lessons learned through experiences that ADRA Kenya can use in implementing similar projects.

II PURPOSE OF THE EVALUATION

The prime purpose of the Project evaluation is to ensure compliance with the evaluation requirement of the project, identify/document lessons learnt and use the evaluation report to improve the design and planning of similar projects in the future.

III METHODOLOGY

The methodology shall include the following:

Analysis - The evaluation team, taking into consideration this SOW, should develop a framework for analyzing the achievement of the projects in terms of program deliverables based on the data collection, reports and information collected during field reviews.

Review Project Reports- The evaluation team should start with the review of the Baseline survey and Program reports to have a better understanding of the program. The team should review the information available at ADRA/Partners. In addition, the team should obtain essential data regarding ADRA's Water improvement program for Mwingi District by reviewing the project proposal, the performance indicators, monitoring plan, the deliverables and any other relevant documentation on the Water improvement program for Mwingi district.

Interview Officials/ Community - Interview officials involved with Mwingi water and sanitation improvement program at, ADRA/Partners, USAID Missions, and ADRA- K field office, ADRA-K Partners, World Vision, Young Jeins, Rotary Atlanta, other donor organizations, and host country public and private agencies. The community that have been involved or have benefited from the program should be interviewed.

Collect quantative data – The evaluation team shall conduct a full blown data collection survey with the enumerators. The enumerators will collect data for the sampled households by the use of a formulated questionnaire designed in accordance with the project performance indicators and in consideration to the goals and objectives of the Water Improvement program for Mwingi district.

Collect qualitative Data - The evaluation team should use some rapid data Collection technique. This could be accomplished through focus group discussions and key informant interviews with project beneficiaries, local implementing staff and the partners.

In the field review, the team will examine the specific goals, objectives and activities of each component of the program as stated in the official document and formulate key questions for each component as it proceeds in the evaluation survey. The questions are for guiding the team to place each component in the wider perspective of the Water Improvement Program's major goal which is to contribute to livelihoods and assets of 200,000 people among the poor and vulnerable in Mwingi district, Kenya through enhanced access and utilization of water resources.

IV: CURRENT PROGRAMS GOALS FOR THE WATER IMPROVEMENT PROGRAM IN MWINGI DISTRICT.

A Goals and Objectives

Contribute to livelihoods and assets of 200,000 people among the poor and vulnerable in Mwingi district, Kenya through enhanced access and utilization of water resources.

The Specific Objectives are;

SO1: Increased access to clean water supply and sanitation services for 87,500 people (12,500 households) among the poor and vulnerable populations of Mwingi District.

SO2: Decreased prevalence of common water-borne diseases affecting 75,000 people in Mwingi district

B. Proposed Outcomes

Through stakeholders and leveraging of opportunities provided by ongoing activities, ADRA will employ its community-based approach to achieve the following outcomes:

SO1: Increased access to clean water supply and sanitation services for 87,500 people (12,500 households) among the poor and vulnerable populations of Mwingi District

Intermediate Result (IR) 1.1- Reduced distances to water sources for both humans and livestock in Mwingi district.

SO2: Decreased prevalence of common water related diseases affecting 75,000 people in Mwingi district.

IR 2.1 Increased uptake of hygiene promotive practices at all levels

IR 2.2 Increased access to gender segregated sanitation facilities

IR 2.3 Improved use of water treatment strategies

Activities related to SO2

- Sensitization and training of students in schools on proper hygiene
- Promotion of child to child sanitation outreach activities
- Construction of (90) ventilated Improved Pit Latrines. (VIP)
- Community mobilization and sensitization on hygiene behavior
- Training of community health volunteers
- Promote the uptake of cost effective water treatment technologies (e.g. boiling and filtration of drinking water before use)

Output Indicators of performance for SO2

1. Number of hygiene talks given to students in various schools
2. Number of community people sensitized on proper hygiene behavior and practice
3. Number of children involved in child to child outreach program activities
4. Number of training sessions held with CORPS
5. Number of CORPS trained
6. % people demand for sanitation facilities
7. Number of community people (male and female) with access to improved sanitation facilities
8. Number of Ventilated Improved Pit Latrines constructed
9. Number of gender segregated sanitation facilities established
10. Number of sanitation dispensers installed for adolescent girls
11. % people using water treatment technologies
12. Number of school hygiene sensitization held
13. % of community trained in sanitation sensitization
14. Number of children regularly attending school

V DETAILED EVALUATION GUIDELINES FOR THE WATER IMPROVEMENT PROGRAM FOR MWINGI DISTRICT OBJECTIVES AND GOALS

A. All the above goals and objectives must be analyzed on the basis of the following five principles. First the timely implementation of activity schedules. Second, integration of intra and inter program activities. Third, a program monitoring and evaluation mechanism that is effective and efficient in collecting and analyzing data for an ongoing intelligent decision making. Fourth, incremental development impacts that is corresponding to the life of the program. Fifth, sustainability of the current and ongoing beneficial activities after the expiration of the program. Sixth, the overall program management.

B. Activity Schedule

- Scheduled activities - Activity schedule should begin with the program staff which is the integral part of improved water program. A given delivery service is as good as its staff.

- Detailed implementation compliance - Improved water programs have detailed implementation list or chart identifying key activities planned, their timing, person(s)

responsible and the relationship between the planned activities and the objectives, performance indicators,

1) Is every activity stated in the detailed implementation plan achieved?

2) Do these activities take into consideration their cost-effectiveness?

3) Were the activities implemented in the most efficient way of delivering the service?

4) Has the program attained its ultimate goals and specific objectives?

C Integration of Activities

By nature water and sanitation improvement programs comprise of many activities and components.

1) To what degree were all the improved water and sanitation-related activities integrated with each other to work towards the same objectives and goals?

2) Did all the components of the program complement each other towards the achievement of the program's objectives and goals?

3) How did the program collaborate/ integrate its service with that of other partners, donors, host government, with improved water and sanitation objectives of the project.

4) Did the logistics plan produce the intended results?

D Monitoring and Evaluation System

The Water Improvement Program for Mwingi district has a clear monitoring and evaluation system that clearly and adequately gauge's the performance of each indicator. In other words monitoring and evaluation system, reports on the program's level of success with verifiable records. It includes specific measurement units, deals with people level effects and impacts and manifests clear links among program activities. The evaluation team must specifically address the following key questions on the program's monitoring and evaluation system.

1. Data Collection -

1) Has the project, for every indicator, in all its activities, clearly identified - the type of data collected, the frequency of data collection, the methodology to be used, the population covered, key assumptions anticipated in the interpretation of data, and the personnel who collected, recorded and analyzed the data?

2. Data Utilization -

1) To what extent has the monitoring and evaluation system been employed for adjusting the activity implementation of the program?

2) Furthermore, how has the monitoring and evaluation data results been utilized in tracking progress related to annual monitoring and impact indicators?

3) How has the program supported other existing data collection systems (i.e. government?

4) How is the collected data useful in informing management in decision-making?

E Development Impact and Capacity Building

1. Development Impact - The core of this evaluation is to gauge the progress of the Water Improvement program in Mwingi district towards making a difference in the lives of the beneficiaries especially through improving water and sanitation of 200,000 people in Mwingi district, particularly among the vulnerable poor population of Mwingi district.

F Sustainability

1. Sustainability refers to the capacity of Mwingi community to sustain the achievements of the program covered under *activity schedule* above.

1) What is the possibility that the intended benefits of the activity itself and its impact shall be sustainable as articulated by the project?

2) To what extent is the local/national government a partner to this program?

3) Does the local/national government have a long range sustainability plan for this program? Discuss in detail your findings.

5) What are the potentials for continued practice of improved water and sanitation for maintenance of the project?

6) Is the exit strategy developed by the project staff and local partners in the life of the project practical?

7) What are the views of the target community about sustaining project services through alternative funding sources at the close of the project?

2. Unintended Outcome - *Beyond this, the team should discuss any project activity that has some positive or negative affect towards the expected outcome of the project.*

VI. COMPOSITION OF THE EVALUATION TEAM

A. The evaluation team will consist of an independent consultant, a number of enumerators for the collection of quantative data, Project Director of the Water Improvement Program for Mwingi district, the Monitoring and Evaluation (M&E) officer, Water Officer, Health and Sanitation officer and some of the other staff members of the Water Improvement Program for Mwingi District.

B. Proposed Calendar Of Final Evaluation Survey Activities

Recruitment of the Enumerators at Mwingi division offices.	17th March2011	Programs, Project director,M&E Officer
Training of Enumerators	21st to 22nd March 2009	The hired consultant M& E Officer Mwingi
Qualitative/quantative data collection	23rd,24th,25th,28th,29th March 2011	Hired consultant, M&E Officer and all the other project field staff.

Data entry	30th,31st,March 1st,4th,5th April 2011	Hired Consultant , M&E,, Project Director
Data cleaning/analysis	6th to 11th April 2011	Hired consultant M&E, Project Director
Report Writing after analysis	18th to 20th April 2011	Hired Consultant
Presentation of the evaluation report draft to the ADRA HQs	21st April 2011	Hired consultant M&E PD
Revising draft report	24th to 26th April 2011	Hired Consultant
Presentation of the final evaluation report to ADRA Kenya HQ	26th April 2011	Hired Consultant/ Programs PD,M&E

*The consulting agency (***ADRA Kenya***) has scheduled the evaluation to be conducted between 17th March and 26thth April 2011 whereby ADRA Kenya shall have recruited enumerators ready for trainings. The same BASELINE questionnaire will be utilized in order to ensure comparability of data with the FINAL survey. The final report of the final evaluation report should be presented to the ADRA Kenya Country Director by 26th April 2011*.

C. REPORT FORMAT

The Evaluation report document will be written using the following outline:

Title Page.
The title page will state the name and program number, names and titles of consultants, and date and name of the document.

List of Acronyms*.*
Unusual or obscure acronyms should be identified at the beginning of the report.

Executive Summary*.*
The executive summary synthesis should be no more than two pages in length and will include: background of program, Key Evaluation findings, Evaluation methodology, accomplishments and impact of the program, concerns and recommendations:

Table of Contents.
The table of contents should outline each major topic section, appendices, figures, maps, tables, etc.

Body of the evaluation.
The body of the evaluation report will include the following in sequential order:

The introduction and background: will include at a minimum: justification for awarding grant, goals and objectives of the grant, implementation

methods, baseline survey findings and the purpose of the evaluation.

Evaluation Methodology: The evaluation methodology will include at a minimum: description of data collected and analyzed by using the SPSS data analysis package, and Evaluation sites selection processes.

Sustainability Issues: The section on sustainability issues will include sequential responses to the sustainability questions and issues outlined in this Scope of Work.

Environmental compliance- The section on environment should consist of a report on the adherence to the environmental recommendations specified on the baseline survey as per the questions set.

Findings and recommendations: The team should clearly spell out its findings both positive and negative, if any, and provide concrete recommendations to the program staff, ADRA-Kenya and key partners.

Results highlight (optional) If possible at all and if there exists an interesting human history related to some aspect of the program, supply some pages (maximum -two) narrative with supporting data.

Appendices.
The appendices included will be at the discretion of the evaluation team. However, the appendices must include the scope of work, itinerary for the evaluation visit, list of individuals interviewed/surveyed during the evaluation, surveys and interviewer questionnaires, references cited, and maps. Additional appendices will be included as determined appropriate during the evaluation.

IX. BUDGET FOR EVALUATION

The detailed budget for the evaluation of ADRA/Kenya Water Improvement Program for Mwingi district will be worked out.

X CITIZEN'S PRIVACY

A General Use of Data

ADRA Kenya/Partners considers it unethical for any member of the Evaluation team to use information gathered from *unsuspecting citizens* during the survey assignment for anything other than the survey under study. Should viable reason present itself for using the information obtained for other purposes, then, ADRA Kenya/Partners must be consulted and prior permission secured. This must be adhered to, especially when the material is of a controversial nature and exclusively involves the private lives of the target population.

B Distribution of the Evaluation Report

The ultimate responsibility for gathering and disseminating information from all of its regional offices around the world lies within ADRA Kenya/Partners. Therefore, ADRA Kenya/Partners expect the Evaluation team particularly the hired consultants, to return to ADRA/Partners all the data and other information which were used as the basis of the team's survey inferences.

It is ADRA Kenya's position that no evaluation report is final until it is: presented to ADRA/Partners, both the consultants and ADRA/Partners discuss the contents in an open manner and clear understandings of all conclusions and any differing views are reached between the consultant and ADRA Kenya reflected in the evaluation survey document.

The final Evaluation report should be presented both in soft and hard copies in ADRA Kenya headquarters (HQ) and sent by Email to the ADRA Kenya Country Director (CD) and copied to the Programs Director (PD)

The evaluation survey report is final only when ADRA/HQ accepts it as final.

VII. DELIVERABLES

The consultant will provide the following to ADRA Kenya:

a. Clean raw data collected during the final survey
b. Draft final separate report and Draft final Evaluation report for review by ADRA.
c. Final survey report and final evaluation report after incorporating ADRA's comments and inputs
d. Copies of interview guides, questionnaires used during the survey and evaluation

Annex 2: Calendar of Final Evaluation Survey Activities

Recruitment of the Enumerators at Mwingi division offices.	20th April2011	Programs, Project Director, M&E Officer
Review of Documents	18th -22nd April 2011	Consultant
Training of Enumerators	27th to 29th April 2011	The hired consultant M& E Officer Mwingi
Qualitative/quantitative data collection	2nd-6th May	Hired consultant, M&E Officer and all the other project field staff.
Data entry	9th- 13th May 2011	Hired Consultant , M&E,, Project Director
Data cleaning/analysis	16th - 20th May	Hired consultant M&E, Project Director
Report Writing after analysis	23rd -26th May 2011	Hired Consultant
Presentation of the evaluation report draft to the ADRA HQs	27th May 2011	Hired consultant M&E PD
Revising draft report	30th May 2011	Hired Consultant
Presentation of the final evaluation report to ADRA Kenya HQ	31st May 2011	Hired Consultant/ Programs PD,M&E

Annex 3: Mwingi District Water Improvement Program Final Evaluation Questionnaire

1. Respondent ----------	Questionnaire Number:_____	Name of Enumerator:_____	
RESPONDENT'S BASIC ADMINISTRATIVE DETAILS			
NO.	**QUESTION DETAILS**	**RESPONSES(OPTIONS)**	**REMARKS**
2	Administrative Division	1. Central 2. Tseikuru 3. Migwani 4. Mui 5. Nguni 6. Nuu 7. Other	
3	Administrative Location		
4	Administrative Sub Location		
5	Respondent Age		
6	Respondent Sex		
RESPONDENT'S DEMORGRAPHIC AND SOCIO-ECONOMIC DATA			
7	Ethnic group	1-Kamba 2- Other	
8.	Current occupation	Farmer 1. Civil/Public servant 2. Other	
9	No. of Cattle owned		
10	No. of Goats owned		
11	No. of Sheep owned No of Donkeys owned		
WATER AND RELATED DISEASES			
12	What is your current source of water?	1. Roof catchment 2. Protected well 3. Open stream 4. Unprotected well 5. Borehole 6. Other	

13	What was your source before the project, if different from above?		
14	What is the current distance in kilometers(KM) to your main water point?	Less than 1KM 1-5KM 6-10KM Over 10KM	
15	Previously, what was the distance before the program?	1. Less than 1KM 2. 1-5KM 3. 6-10KM 4. Over 10KM	
16	How long can one take to and from the water source?	1. Less than 1HR 2. 1-5 HRS 3. 6-10HRS 4. Over 10 HRS	
17	How much water in litres is used in your household per day?		
18	How much do you spend per day on buying water (if you buy)?		
19	Do you experience water related diseases in your family presently?	1. YES 2. NO	
20	Before the program did you experience any water related diseases in your family?	1. YES 2. NO	
21	What do you do prevent these water related diseases in your family?		
22	Have you received any training from the program in regard to preventive measures to water related diseases?	1. YES 2. NO	
23	If YES ,give details		
24	What is your current source of drinking water?		
25	Do you treat drinking water? 1. YES/ 2.NO If YES what method do you use		
26	Why do you treat water for drinking purpose? How did you gain that knowledge?		

	Did the program participate in any way towards this?		
SANITATION AND HYGIENE			
27	Do you have a latrine in your homestead?	1. YES 2. NO	
28	If YES, what is the nature of the latrine floor?	1. Earth 2. Cement 3. Wood 4. other	
29	If you have an existing latrine do you have a hand washing facility outside the latrine?	YES NO	
30	If NO, please explain why?		
31	Currently are there latrines constructed close to water points in the locality?	1. YES 2. NO	
32	How do you maintain cleanliness in your homestead?		
33	What measures have put in place to see that domestic hygiene is observed?		
34	Has the program assisted you and your family towards the effort to observe domestic hygiene?	1. YES 2. NO	
35	What are your current rubbish/other waste disposal method?		
36	What was your rubbish/other waste disposal method before the program was initiated?		
PROJECT SUSTAINABILITY			
37	Is there an existing water management committee in this area?	1. YES 2. NO 3. Don't Know	
38	If YES, how was it elected?		
39	What is the composition	No. of Men:_____	

	(Gender)?	No. Of women:_____	
40	Has the committee been trained of water management?	1. YES 2. NO 3. Don't know	
41	If YES, by whom?		
42	Are children in school being trained on safe water handling and other hygiene practices?	1. YES 2. NO 3. Don't know	
43	If YES, By whom?		
44	Are there problems in managing your water project?	1. YES 2. NO	
45	If YES, list	1. 2. 3.	
46	What suggestions can you offer to overcome these problems in future?	1. 2. 3. 4.	
47	If NO, comment		
48	Who has supported the development of this water facility and other related projects in this area?	1. Community 2. ADRA 3. GOK 4. Others	

PART B: RESPONDENT'S COMMENTS

49. Has the program been project helpful to you and your family? YES/NO (seek a clear explanation of the answer)

_____
_____
_____
_____
_____
_____
_____
_____

50. Has the program contributed towards improvement of your family's livelihood? YES/ NO

If YES, explain how?

_____
_____
_____
_____
_____
_____
_____
_____

If NO, where did they go wrong as per your expectations?

_____
_____
_____
_____
_____
_____
_____
_____

51. Has the program contributed towards improvement of your household Assets? YES/ NO
If YES, explain how?

_____
_____
_____
_____
_____
_____
_____
_____

If NO, where did they go wrong as per your expectations?

_____
_____
_____
_____
_____
_____
_____
_____

52. Please, What is your comment on the whether the program has succeeded of failed in attaining it‘s objectives? (Seek reasons for /against)

_____
_____
_____
_____
_____
_____

53. What advice would you give to the program management for future considerations in similar programs?

_____
_____
_____
_____
_____

_____
_____
_____
_____

Closing Remarks:
Thank the respondent for his/her time and willingness to give information
God Bless, all

Annex 4: The Daily Itinerary of the evaluation visits

DATA COLLECTION SITES AND OTHER INTERVIEWS

	Division	Site name	FGD	Key informants	others
Day One 3/5/2011	Nuu	Wanguio Borehole	Water committee	Chairperson	Para -technician
		Nyaani borehole	Water committee	Chief Nyaani location	CORP Para-technician
		Nguka Imwe Borehole	Water committee		Para-technician
		Wanguio primary school	School committee	Head teacher	CORP Para-technician
		Nyaani secondary school	School committee	Head teacher/ PTA chairman	
		Nguka Imwe primary school			
Day Two 4/5/2011	Mui	Kamulewa Borehole	Water committee	DO Mui Division	Para-technician
		Nzia Bore hole	Water committee		Para-technician
		Mathuki borehole	Water committee	Chairman	Para-technician
		Munyuni primary school	School committee	Head teacher	CORP
		Nzia Primary school	School committee	Head teacher	Para-technician
		Mui polytechnic		Manager	Councilor Mui/Kathonweni
Day three 5/5/2011	Nguni	Kithumula borehole	Water committee	Chairman	Para-technician
		Kavoko borehole	Water committee	Secretary	Para-technician
		Kwa mutunga sand dam	Committee	Chairman	Users/beneficiaries
		Ukuuni/kamutio borehole	Water committee	Chairman/secretary	Para-technician
Day four 6/5/2011	Central	Kaunguni borehole	Water committee	Chairman	Para-technician
		Kiomo secondary school	School executive committee	Head teacher	
		Kwa kuvola borehole	Water committee		Water committee
		Kavauni borehole	Water committee		Water committee
		Itongolani borehole	Water committee		Water committee
Day five 7/5/2011	Migwani	Mwanzenge sand dam	Committee	Chairman	Beneficiaries
		Muswani borehole	Water committee	Chairman	Para-technician

Annex 5: List of Individuals interviewed/Held Discussions

- DC Mwingi Central
- DO Mwingi Central
- Water Officer(Central Division)
- Drought Management Officer (Larger Mwingi District)
- Public Health Officer Mwingi District
- DC Mwingi East
- Water Officer(Mwingi East)
- Program Director(ADRA-K Mwingi Project)
- M& E officer(ADRA-K Mwingi Project
- Water Officer(ADRA-K Mwingi Project
- Health Officer(ADRA-K Mwingi Project
- Harrigan Mukhongo- USAID- Business & Organizational Development specialist
- Martin Mulongo- USAID- WASH Specialist
- Ann Kiambi- Chairlady Kithumula B/Hole
- John Wotuku Mwasya- Secretary Kithumula B/Hole
- Martim Mutunga- Committee member
- James Mutunga- Para-technician
- Alice Mutua- Business lady Katooni market
- Mulwa- Para- technician
- Jeremiah Musyoka- para-technician Wanguio B/hole
- Martha Juma Ngulo Business lady
- Elizabeth Mwendwa- Teacher wanguio prim school
- Paul Munuve Mutia- Chair person Nyaani B/hole
- Nzau Munywoki- Para-technician
- Mwikali Charles
- Makuthu Kisilu

- Allan Musyoka Nzila
- Mary Kanini
- Monicah Makau
- Mati Mulatya- Village Elder

Annex 6: List of trained CORPS

Community Own Resource Persons for Migwani Division

NO.	NAME	LOCATION	SUBLOCATION	MOBILE NO.
1	MUMBI MBUA	ITOLONI	KAVALIKI	0726115579
2	KIMANZI KASYULA	KYOME	NDALUNI	
3	NAUMI MUSYOKA	NGUUTANI	NGONGONI	0712954319
4	ESTHER NZAMBI	MIGWANI	KYAMBOO	0725426824
5	MARY SYUMITI	THITANI	KITULANI	0713642385
6	GRACE MUTHUI	THITANI	KITULANI	0727418594
7	JOHN B MWASI	THITANI	KITULANI	0723508184
8	AGNES K MUSEE	THITANI	KAVAINI	
9	TERESIA M MUSYOKA	THAANA NZAU	YENZUVA	0713655662
10	NICHOLAS M KEA	THAANA NZAU	KYUSYANI	0727886207
11	GEOFFREY M KALATA	THITANI	KAVAINI	0727434197
12	MONICAH MUTEI NGUE	THOKOA	THOKOA	0724151396
13	JACOB MBUI	KYOME	KYOME	
14	JULIANA M SILA	MIGWANI	MIGWANI	0712196119
15	WINROSE K KASAANI	THAANA NZAU	THAANA NZAU	0728176075
16	EUNICE BAHATI	KYOME	NDALUNI	0715275298
17	ANNAH KENYA	KYOME	KYOME	0700126992
18	DAVID LUNDA	THOKOA	KASEVI	07177090005
19	MICHAEL MBITI SAMBU	NZAWA	MUTHIONI	0735024792
20	AFREDA KAVUTHA	NZAUNI	MUIVU	
21	JOSPHAT M MWASA	ITOLONI	KAVALYANI	0713744988
22	JOSEPH M NDASYA	NZAUNI	NZAUNI	0725799762
23	JULIANA M MUTHUI	KAKULULO	NGUUTANI	0728616182
24	MBITI MUTUA	THITANI	KANYAA	0724910330
25	DANIEL MUSYIMI MATHU	ITOLONI	ITOLONI	0722693914
26	ROSPHINE MBITI	NZAWA	NZAWA	0720077054
27	MUANGE MAKAU	NZATANI	NZATANI	0714681092
28	ELIUD M MBUVI	NZELUNI	NZELUNI	0727911678
29	MICHAEL KASAMBA	THAANA NZAU	WINZYEEI	0738132036
30	LENAH M JACKSON	MIGWANI	KAUNGUNI	0729861377
31	DAMARIS M KIRYUNGU	ILALAMBYU	MUNGALU	0720497940
32	ALICE MUMBE MBAVU	ITOLONI	KAVALYANI	0716622284
33	BENSON MULWA	THOKOA	KASEVE	0710494129
34	ROSE M BEN	NZAWA	KATOTENI	0726568432
35	FAITH M MUTUA	NZAUNI	MUIVU	0721448904
Community Own Resource Persons for Nuu Division: Larger Mwingi District				
NO	NAME	SUBLOCATION	VILLAGE	MOBILE NO
1	JOHN MUTHUVI	MUTYANGOME	KIVUNDUI	0714006724
2	JONES MULLU	MUANGENI	KAKUNGUU	0719648058
3	MUTUTA KITEME	MUANGENI	KAKUNGUU	0725221824
4	KASEE NGOTU	NGIENI	KAWALA	0716459665
5	MWENDWA KIVOTO	NGIENI	KAWALA	0726477223
6	MARTHA MULWA	NGIENI	KAAI	0710540115
7	WILFRED MUSILA	MUANGENI	KASEVI	0728791947
8	ONESMUS MWASI	NGIENI	KAAI	0710540115
9	SHEDRACK KITHUSI MUNYOKI	NGIENI	KAAI	0727098295
10	BENEDICT KAVULUKU	NGIENI	KAWALA	0720527690
11	MBOYA KAVILA	NGIENI	KAAI	0720527690
12	SALOME MULEI	NGIENI	KAWALA	0726085844
13	MBULI MUTINDA	MUTYANGOME	NZEENI	0714776446
14	MARIA JULIAS	NGAANI	NUU	0729979425
15	LENNA NZUKI	NGAANI	NUU	0712661214
16	PAUL MUTIE	NYANI	WANGWI	0737801363
17	BENJAMIN MWASYA	NGAANI	MATULANI	0727536703
18	JOSEPH MULI	NGAANI	MATULANI	0727536703
19	ESTHER KIVINDU	NGAANI	NZANZU	0729473851
20	MERCY MWENDE MAKAU	NGAANI	NZANZU	0729473851

21	JOSHUA K MUTHUI	NGAANI	MATULANI	0738546440
22	JACOB SAMMY KITHEKA	NGAANI	LUULU	0724818722
23	DAVID IVIA	MWAMBIU	KYUNDUANI	0723157599
24	MBUTHYE KAVU	NGAANI	NZANZU	0729473857
25	PHILIP KITENGU	NYAANI	NGULIWI	0737801363
26	NGUU MUTINDA	NYAANI	KEA	0737801363
27	KASYOKA MUSEMBI	NGAANI	NZANZU	0712012126
28	MWENZE MUTINDA	MALAWA	KALUYU	0729885285
29	MWIKALI MBUTHA	MALAWA	KALUYU	
30	KUYUMBA NDUKI	MALAWA	NDUNGUNI	
31	PRISCILLA MWENDWA	KYANGATI	NZEENI	0715312252
32	TITUS MWANZA	KYANGATI	MUTHITHINI	0716134056
33	KIOKO SAMMBU	KYANGATI	WISILI	0716134056
34	MBUVE MWANGE	KYANGATI	NDANDINI	
35	KINGOLA SAFARI	KYANGATI	MUTHITHINI	
36	KATHINA MWISIWA	KYANGATI	NDANINI	0721217581
37	KILONZI KILUNGYA	KYANGATI	NDANDINI	0727165353
38	MUSEE MWASYA	KYANGATI	YONGONI	

Community Own resource Persons (CORPs) for Mui Division.

NO	NAME	SUBLOCATION	VILLAGE	MOBILE NO
1.	Paul N. Musyimi	Katilini	Itiku/Mutulu/kavoko	0735661374/0717380700
2.	Mutisya Mutunga	Ngooni	Kinyuni	
3.	Ndinda Nzomo	Kalitini	Kitise/Ndithini/Kiteta	0722963314
4.	Regina Munyoki	Kalitini	Itiko/Ngiluni	
5.	Ndania Mutisya	Kalitini	Kimongo/kimongo	0728 032 716
6.	Ndanu Musyimi	Kalitini	Kitise /Kariokor	
7.	Peninah M. kivulai	Mui	Ngooni/Kavumbu	0736 228 355
8.	Peninah K. Mwinzi	Mui	Ngooni/Lundi	0737 918 264
9.	Joshua M. Mutemi.	Mui	Ngungi/Wangwiu	0735446 376/ 07151771153
10.	Charles N. Kyondo	Kalitini	Yumbu/Kwamungatu	0721 970 673
11.	Lucy M. kyere	Kalitini	Yumbu/Kamulewa	0729 754944
12.	Purity N. Mwendwa	Mui	Ngiluni/Wangwiu	0712 043 786
13.	Muasya mue	Mui	Ngooni/Nzouni	0734 390 145
14.	Syombua Kitheka	Kalitini	Kitise/Ngunini	0728 257 064
15.	Syombua Muthuvi	kalitini	Yumbu/Wangwiu	0715 50 9149
16.	Rebecca m. Nguu	Ngungi	Ngungi/Ngaa	0723 286257
17.	J. Munyiva M	Ngungi	Syungani	0731204896
18.	Joshua Mbutu	Kalitini	Yumbu	0721 826006
19.	Doris M. Ngei	Mui	Ngiluni/Imale	0735 918 043
20.	Regina m. munyambu	Mui	Ngiluni/Katingani	0734 507307
21.	Angeline M. Muimi	Mui	Ngiluni/Kyume	0738459640
22.	Nzyake mwendwa	Kalitini	Itiko/Yaka	0728 444 544
23.	G.K. ndumbu	mui	Ngungi/Munyuni	0736 491 570
24.	Kimanzi Matenge	Kalitini	Kitise/Munou	
25.	David Muthuvi	kalitini	Itiko/Kavaliki	0726 207 864
26.	Pauline Kimanzi	Mui	Ngooni/Ilekya	0735 043 739
27.	Mulwa Kimani	Kalitini	Kitise/Ngaa	0722729389

Community Own Resource Persons (CORPs) For Nguni Division

NO	NAME	SUBLOCATION	VILLAGE	MOBILE NO
1.	John Mwangangi	Mwasuma	kawala	
2.	Dorcas Kenyatta	Mwasuma	Mwania	0724 228 443
3.	Kelita Muthengi	Kalanga	katumbi	
4.	Muema Kilulu	Mbuvu	Katine	0712455 745
5.	Wilson Kitundu	Mathiakani	Kaunda	
6.	John m. Juma	Mwasuma	Kiisu	0717166755

7.	Simon K. Syengo	Mathyakani	Kathaala	0726357537
8.	Philip Mukavi	Mbuvu	Mbuvu	0725 715 005
9.	John Kitoo Kimwele	Lower Mwalali	Kiio	0715192260
10.	Serah Sammy	Mbuvu	Kalalu	0720 367 645
11.	Mutati Wambua	Mwalali	Makutano	0715 125 315
12.	Kasyoka Kilonzo	Mathyakani	Musalani	0726 847 883
13.	Joyce N. Wambua	Mwasuma	Mukumi	0712592261
14.	Hellen Ngei	Mathyakani	Kaluku	0720 759 280
15.	Anthony Mwasi Mukuli	Ukasi	Muaani	
16.	Tabitha Mumbi Mulu	Mwalali	Kaluma	0714 007 790
17.	Mary N. Ngei	Kalanga	Muunga	0714 225 594
18.	Agness Ngina Mutua	Kalanga	Syomikuli	
19.	Kavutha Kithikii	Kamutiu	Kyangawee	
20.	Peter Mwasya mulango	malatini	malatini	
21.	Elizabeth Ndanu Kithuka	Kamutiu	Kavisu	0713 268 176
22.	Theophilus Musyoka Ndumbu	kamutiu	Ivuusya	0712461570
23.	Mwende Viti	Ukasi	Kamande	0712388 282
24.	Magret Mbathe Mwema	Mbuvu	Ngulini	
25.	Assumpta Nzembi Kamau	Mbuvu	kavuko	0714 009 747
26.	Maurine Kithee Martin	Nguni	Nguni Market	0733 876 351
27.	Martin Mulu	Nguni	Nguni Market	0714 390 515/0734074224
28.	Magret Ngina	Nguni	Mwalikathi	0712229748
29.	Jackson Mutua Muneeni	Nguni	Nguni Market	
30.	Daniel Kusya Mwalika	Kamutiu	Kyanzue	0710897586
31.	Nduuti Mutisya	Mwasuma	Mukumi	0715406288
32.	Naomi M. Mukumi	Mwasuma	Mukumi	0717 138831
33.	Theinak Wambua	Mwasuma	Nguni	0724 061 051
34.	Ruth N. Peter	Masuma	Kyande	
35.	Eunice Syombua	Mwasuma	Syokathenge	0729794011

Community Own resource Persons (CORPs) for Mwingi Central Division

NO	NAME	SUBLOCATION	VILLAGE	MOBILE NO
1.	Joseph M. Mwinzi	Waita	Musambui	0723
2.	Joseph M. Mwinzi			
3.	Benard M. Muthuvi	Kiomo	Kiomo	
4.	Roda M. Muimi	Kiomo	Kiomo	
5.	Laban M. Rindiri	Kiomo	Kiomo	
6.	Ismael Kilonzi Musee	Kiomo	Kiomo	
7.	John M. Musyoka	Kiomo	Kiomo	
8.	Janet M. mulanga	Kiomo	Kiomo	
9.	Dorcas M. mutemi	Waita	Waita	
10.	James M. Mulo	Endui	Waita	
11.	Annah M. Mutua	Endui	Waita	
12.	Kimanzi Kutu	Endui	Waita	
13.	Charles Mwinzi Maithia	Endui	Waita	
14.	Katui Mbiti	Kiomo	Kiomo	
15.	Joshua Peter Syanda	Kiomo	Kiomo	
16.	Angeline m. Kavumbu	Kyethani	Kiomo	
17.	Jonathan Kimanzi Michael	Kyethani	Kiomo	
18.	Lucy Nthenya Kimeu	Mwingi Central	Mwingi Central	
19.	Musili Kakonze	Kyethani	Kiomo	
20	Geoffrey Kyalo Munyoki	Kyethani	Central	
21	Bentettah Mwikali Masimbu	Kyethani	central	
22	Josphene Nguno Munyoki	Kyethani	Central	
23.	Gladys Munene Kavu	Kyethani	Central	
24.	Douglas Kimanzi	Kiomo	Kiomo	
25.	Musyoki Kimanzi Michael	Kiomo	Kiomo	

Annex 7: Sample photos

Migwani CORPS undergoing training.

Same Migwani CORPs undergoing training.

Same Migwani CORPS undergoing training

Same Migwani CORPS in a training workshop

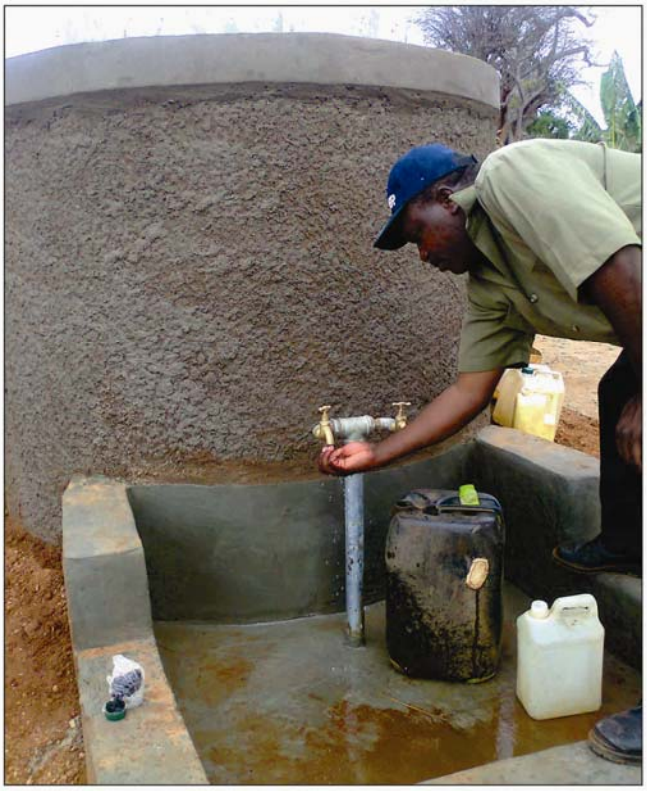
Mwingi Central CORPs raising their tools of trade after hygiene and sanitation training workshop.

Talking wall in Migwani primary school.

Talking wall on a tank in wangwiu Primary school

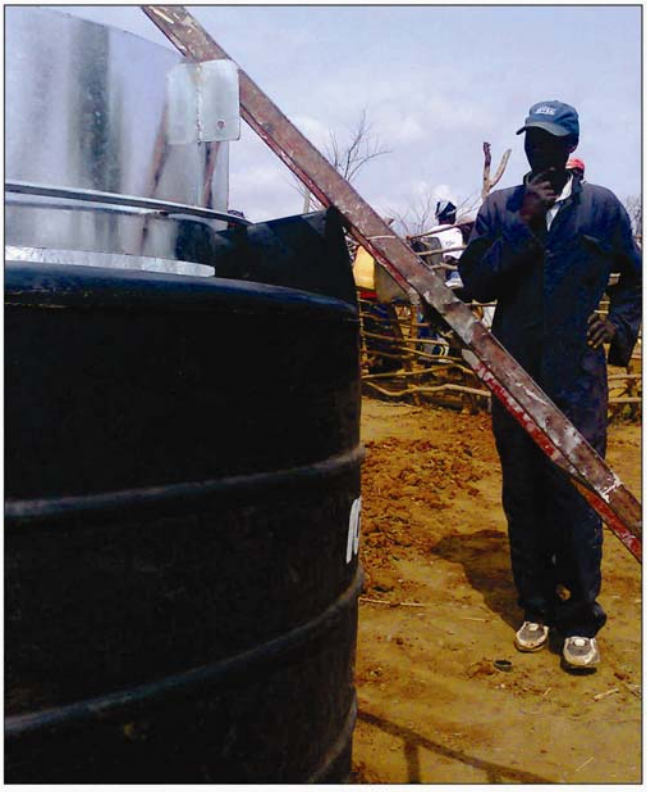
Talking wall with Hygiene and sanitation information in Munyuni Primary school.

Women fetching water near less stress and high personal hygiene realized.



Fluoride free flowing water from tap being tested by GOK STAFF.

Para technicians' training.



Deflouridation plant on construction for Wikithuke bore hole.

MINISTRY OF WATER
AND IRRIGATION

ADRA
ADVENTIST DEVELOPMENT
AND RELIEF AGENCY- KENYA

USAID
FROM THE AMERICAN PEOPLE